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CONTENTS

ORIGINAL ARTICLES

PAGE

The Relationship of the State Department of Public Health and the Medical Profession. *C. St. Clair Drake, M. D., Springfield, Ill.* 57

The Results to be Expected from a Tonsillectomy or an Adenectomy. *C. F. Burkhardt, M. D., Effingham, Ill.* 59

Spinal Anesthesia in General and Genitourinary Surgery. *George F. Thompson, M. D., and John S. Nagel, M. D., Chicago* 62

ORIGINAL ARTICLES

PAGE

A Glance at Some of the Old and New Theories on the Causation of Cancer. *J. Rawson Pennington, M. D., Chicago* 66

Tuberculin Treatment of Tuberculosis in Children. *Ernest Lackner, M. D., Chicago* 76

The Selection of a Practical Method of Blood Transfusion. *Karl F. Snyder, M. D., Freeport, Ill.* 81

(Continued on page 36)

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Prostatic Calculi
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Partially Autolyzed Pneumococci in Lobar Pneumonia
Treatment of Empyema
Fracture of Neck of Femur
Cystic and Fibrocystic Disease of Long Bones
Peroneal Tendon as Transplant
Derangements of Semilunar Cartilages of Knee-joint
Osteocartilaginous Joint Bodies
Nervous Symptoms in Pernicious Anemia
Surgical Treatment of Progressive Ulnar Paralysis
Sodium Bromid in Radiography
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ILLINOIS MEDICAL JOURNAL

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Original Articles

THE RELATIONSHIP OF THE STATE DEPARTMENT OF PUBLIC HEALTH AND THE MEDICAL PROFESSION.*

C. ST. CLAIR DRAKE, M. D.,

Director of the State Department of Health,

SPRINGFIELD, ILL.

In performing the functions and duties imposed upon it by law,—in affording the maximum of protection to the lives and health of the people,—it is essential that the State Department of Public Health shall reach more or less directly every community and every man and woman in the commonwealth. The theory of preventive medicine has undergone radical changes during the past generation. Health officials are no longer permitted by intelligent public opinion to content themselves in merely meeting emergencies as they arise. Health promotion has become more important than disease prevention and disease prevention has come to be regarded as more to be considered than disease suppression. The old time policy of acting only in the development of emergency; of merely standing ready to make the best of a bad situation, in mending the damage after it has occurred, has been relegated to another and less enlightened day. To attain its best results, the Department should make its influence felt in every county in the State during each of the three hundred and sixty-five days in the year.

And in carrying out its work of prevention, the Department must deal not with masses nor yet with classes; but must endeavor to arouse the interested attention of the individual. Our experiences during the war have driven home the meaning of the public health axiom that a state or nation can be only as strong as the individuals who constitute it, and those experiences demonstrated to us that preventable disability is far more prevalent among the young men of the nation than we were ever willing to believe before.

In reaching out to the people of the State, the Department employs the public press and other means of popular education while an effort is made to maintain a personal contact with every community through a friendly and helpful relationship with the local health authorities. Regardless of these means of contact with the people, steadily developing in reaching power though they are, the Department relies for its most direct and most helpful influence upon the family physician who is the medical and health advisor of the individual. The success or failure of any endeavor for the betterment of the public health depends very largely upon the attitude of the medical profession and, as a rule, that attitude has been sympathetic and encouraging in the extreme and the cordial relationship which has existed, while tremendously helpful to the Department, has not been wholly without compensating benefits to the doctor.

During the forty years, since the creation of the old State Board of Health, preventive medicine has progressed with giant strides. Science has developed truth that has afforded remarkable opportunity for progress and, in so doing, has imposed serious obligations. The changes in health administration have at times been radical if not revolutionary; but no more radical and no more revolutionary than the changes which have come in our scientific thought. Other states, perhaps more progressive, further seeing and more liberally financed, have set a pace in public health advancement which has been difficult to follow; but with all of the changes necessitated by this movement forward, the physicians of Illinois have been generally sympathetic, interested that the State should maintain a health service commensurate with her intellectual and commercial supremacy and guaranteeing to the people the highest degree of protection.

In all of these years of public health progress,

*Read before the Section of Public Health and Hygiene of the Illinois State Medical Society, Peoria, May 20, 1919.

however, there have never been such rapid strides and such insistent demands for efficient service as there is at the present time and has been since we began our participation in the world war, and that demand for progress, far from abating, grows more pronounced as we enter upon the period of reconstruction. The Federal government is apparently determined that the nation shall never again suffer from the degree of physical unpreparedness, much of it preventable, that has been disclosed during the past two years, and is calling upon the State health departments for readjustments of programs with that end in view. And the State departments can have but one reply to this call for service, in which they will necessarily have the whole-hearted and sympathetic cooperation of the medical profession.

The physicians of the county responded with remarkable unison to the national call in time of war and they will respond with equal loyalty to the nation's demands in times of peace. And the policy of the new health program enunciated by State and Federal health organizations tends more and more to the reaching of the individual and the promotion of individual health in which the physician is always an indispensable factor.

Modern health administration in asking much of the physician is likewise giving much to the physician. The individualization of health work, instead of threatening the material interests of the doctor, actually benefits him in many ways. It is safe to say that the more intimately the individual physician becomes acquainted with the aims and purposes, the activities and underlying motives of the State Department of Health, the more valuable his influence becomes to the people of his community and the more useful the department becomes to him in the pursuit of his practice.

Health officials are urging at this time periodical physical examination for all persons as the means of detecting insidious, organic diseases in their incipient and easily curable stages and, while the medical profession may be called upon at certain times to render gratuitous service in such examinations for purposes of education and demonstration, it is unquestionably true that the establishment of this excellent custom is not only capable of saving or prolonging thousands of human lives, but brings increased practical returns to the physician. The more generally the people think health and talk health, the more generally they seek medical counsel and guidance and the more generally the physician is employed.

It is invariably true that, whenever there are established strong tuberculosis associations with their dispensaries and nursing service together with the educational and publicity campaigns essential to their success, the tuberculosis specialists and general practitioners have an actual increased clientele both among well-to-do people, actually suffering from tuberculosis and seeking early treatment for it, and among persons who have come to think seriously of their own health on account of the popular agitation of the subject. This is likewise true of communities in which campaigns against venereal diseases have been launched with their attendant dispensaries and other medical activities. In all such communities, specialists in venereal diseases and general practitioners report increased demand for medical service and material decrease in counter prescribing, self-medication and decrease in the patronage of advertising quacks. In these cases, the course which is best for the people of the community and which is insistently urged upon them is likewise best professionally and financially for the reputable physician.

In the clinics for crippled children, especially designed for the victims of poliomyelitis, sixteen of which are now in successful operation throughout the State, the department acts largely as consultant, receiving clinical patients through the local physicians and returning the patients to the local physicians for interim and supplemental care and treatment. In practically every instance, these clinics have been declared as directly helpful and profitable to the physicians of the counties in which they are situated.

The same helpful attitude is maintained by the diagnostic laboratories of the department in its relationship with the medical profession. While these laboratories are, of course, maintained for the benefit of the people as a whole, the service of the laboratories is rendered almost entirely to and through the physicians of the State. While occasional sputum specimens are received from laymen, the name of the attending physician always accompanies the specimen and the report is sent to the physician and, in practically every instance, it is found that such specimens are sent through the direct advice or

suggestion of the doctor. In the case of Wassermann tests, it is doubtful if the laboratory ever received a specimen except from the physician and this is likewise true of specimens from patients suspected to be suffering from diphtheria, typhoid fever and other communicable diseases. In actual practice, the laboratory is maintained and operated for the convenience of the medical profession, saving the individual physician hours of labor and considerable outlay and money and, if one may judge by the increasing demands for laboratory service, this convenience is becoming generally appreciated by the medical men throughout the State.

On the other hand, the more generally the medical profession engage in modern health activities in their own communities, the more frequently they utilize the services of the staffs of the several divisions of the department, the more constantly they employ the services of the diagnostic laboratories for the early and exact detection of communicable diseases, the greater assistance they are rendering the department in meeting its obligations to the people—the obligation concerning the interests of the lives and health of the people.

In its relationship with the local health authorities throughout the State, the department endeavors to maintain the same helpful and cordial attitude which characterizes its relationship with the medical profession. This relationship is cooperative rather than supervisory or dictatorial in character, the department offering constantly to render such specialized service as its several divisions may afford which may lead to the satisfactory solution of local health problems and very rarely, and only in the face of extraordinary conditions, exercising the supervisory authority given the department under the law.

This service, freely offered and very generally employed, ranges from the epidemiological service of the Division of Communicable Disease, the engineering assistance which comes through the Division of Sanitation and includes the framing of health ordinances, the making of surveys, the organization of health departments, the designing of isolation hospitals, the establishment of public health nursing service and kindred friendly offices of many kinds.

This cooperative relationship with communities and especially with the medical profession gives promise of being even more definitely developed through the State and county collaborating health service which is now being definitely organized. In the working out of this plan, each county medical society is asked to designate one or more of its members who represent the county in this collaborating service. In the absence of the district health officer, and in the existence of an emergency, these county representatives will be called upon to act for the State, receiving therefor reasonable compensation on a per diem basis.

The representatives from all counties will be brought together from time to time at central points for conference on public health subjects and particularly to consider the more recent advances in preventive medicine of more or less technical character, with the understanding that they shall return to their home communities and shall present the results of these conferences at meetings of their county medical societies.

It is believed that, through this plan, the department will acquire a very close and intimate contact with the physicians in all parts of the State and that the more modern health problems, which the practicing physician has been in the habit of relegating to the health officer, will acquire a new interest and that all medical men will come to look upon themselves as more definitely responsible for the public welfare than they have in the past.

So far, forty-six counties have responded to the invitation of the department to participate in the development of this service, and with the resumption of peace and the return of more normal times, it is expected that the service may be readily completed,—a service which will prove helpful to the department in meeting the demands of the people and helpful to the medical profession of Illinois.

THE RESULTS TO BE EXPECTED FROM A TONSILLECTOMY OR AN ADENECTOMY

C. F. BURKHARDT, M. D.,
EFFINGHAM, ILL.

I will preface my subject by assuming that either of the operations (and in most cases of children in which operative procedure is indi-

cated we find that the combined operation is necessary) is performed by an operator especially skilled in this special field of surgery. For it is an undebatable fact that if the best therapeutic results are to be expected, the operative technic should measure up to the nearest approach to the present-day standard of perfection. The operation which leaves a clean fossa, and the pillars and all other normal parts of the throat uninjured, is the ideal operation. It is unimportant as to the method or technic employed by the individual operator, so long as the above described standard is maintained.

Dr. Giles[1] says: "The first point is to recognize that tonsillectomy is not a trivial operation, which an apprentice may safely undertake, but a procedure requiring an expert's qualifications, and by no means devoid of danger. Second: There are in all medical centers at the present time specialists competent to do this operation safely and satisfactorily. Third: The charge made by specialists is not, as many suppose, exorbitant, but moderate, and where the patients are indigent, they can secure without cost the most skillful and considerate treatment."

There are quite a number of pathological conditions at the present time which are believed to be traceable to the tonsils or adenoid body; and if the indictment is erroneous with reference to a part of these, there is still a considerable number left for our consideration, or to justify and indicate the removal of a vast number of tonsils and adenoids.

Now the phase of this subject which I wish to emphasize, and which we, as throat specialists, should be very deeply concerned in, is, what permanent results can we expect or promise our patients, from a therapeutic standpoint? That is, what is the correct prognosis as regards the clearing up of the pathological condition for which we have held the tonsil or adenoid responsible, and on which we based our indication for operating?

If the dignity of tonsil and adenoid surgery is to be maintained, more care should be exercised as regards the examination and diagnosis previous to operation, and avoid unnecessary operation and the sacrifice of normal innocent tonsils. I am convinced from my personal experience that there is a strong tendency, at the present time, to be a little careless in the diagnosis of the indications for tonsillectomy, especially, and to charge up against the tonsil practically every disease to which the human body is liable. This is already arousing justifiable criticism.

The majority of cases of poor results or failures following tonsillectomies are due to carelessness in studying the case, thereby causing the removal of tonsils for the relief of pathological conditions for which they are entirely innocent. This error is more likely to occur where the condition is due to systemic infection. Acute or chronic arthritis, endocarditis, pericarditis, chorea, acute or chonic nephritis, neuritis, osteomyelitis, appendicitis, peritonitis, infectious jaundice, cervical adenitis, and chronic toxemia, are some of the most common diseases which originate from systemic infection; and we realize that the tonsil is guilty and responsible, per se, in many cases, for the above diseases.

But while this is true, there are many cases in which the disease is due to some other focal origin, and without proper and careful search for the guilty primary foci, the tonsils are assumed to be guilty, and are removed, without proper clinical evidence of their guilt; and if the foci of infection is located elsewhere, in the gums or teeth, the gastro-intestinal or genito-urinary tracts, the ears, or the nasal accessory sinuses, the results of a tonsillectomy will, of course, prove a failure. This mistake, obviously, can only be made in those cases where the tonsils are free from infection and are causing no obstruction; for if they contain infection or are causing obstruction, the safest rule is to enucleate them. It is a pretty safe rule, however, to regard the tonsil as a dangerous focus of infection, until it is proven to be innocent after a careful examination.

But the point I wish especially to emphasize is that a careful, painstaking examination should be made, before a tonsillectomy, in every case where there is a disease supposed to be due to a systemic infection, and the tonsil is under suspicion. I believe this will materially increase the percentage of good results.

There is one point which I consider important, in connection with the examination of the tonsils, especially where they are believed to be responsible for a systemic infection, and that is the ap-

1. Giles: Disappointments Following Tonsillar Operations and the Remedy.—Penn. Med. Journal, July, 1917.

pearance of the anterior pillar. If the tonsil contains infection of a chronic character, in the great majority of cases the pillar will have the appearance of a chronic congestion, i. e., a dark red color. There may be no other history or clinical evidence of tonsil infection or disturbance, but if this condition or appearance of the anterior pillar is present, I have found it a safe rule to advise the removal of tonsils for infection. This condition or sign of infection is usually found in the submerged type of tonsils.

In that class of cases where the child is anemic, white faced, open mouthed and catarrhal, a favorable prognosis can be made with some degree of certainty, and in most cases assurance can be given of very excellent results; for after the removal of the adenoids, or both adenoids and tonsils, which are obstructing free breathing or drainage from the sinuses or eustachian tubes, and perhaps in some cases supplying the circulation with infection, in the majority of cases of this class the child will improve rapidly, and in a short time become almost robust. But while this is true in most cases of this class, we should not lose sight of the fact that there are at least a small percentage in which the results will be disappointing. I refer to those children in which operative measures have been so long neglected that there are permanent anatomical changes, or permanent impairment of function; for if there exists permanent impairment of mentality, of the hearing, of the development of the chest, of the development of the face or nose (I refer to the typical adenoid face), and the character of the voice, we cannot expect results to be other than only fair. And it is best to be very guarded in our prognoses, and not promise very much in this class of neglected cases, for if we do, the patient, or the parents of the patient, are going to censure the operator severely. The only hope that should be held out is that perhaps the impairment of function will be stayed in its progress, and if there is any improvement in their condition they will be lucky. Of course, if the condition of the throat is causing general anemia, good results can be promised in that respect only.

The cases in which results following operation will usually be exceedingly good, and can be prognosed favorably and accurately with few exceptions, are those in which the indications for operation are recurring attacks of acute tonsillitis, cervical adenitis, in the early stage of tube or ear disturbances, mouth breathing, and recurring attacks of peritonsillar abscess.

Recurrence of lymphoid tissue in the tonsillar fossæ, following a good clean tonsilectomy, where the tonsil is removed within its capsule, is not so rare as some authorities would have us believe. But in practically all cases where tonsillar tissue is found, it is due to faulty technic, or to a condition which occurs even in cases operated on by the most skillful operators. I have reference to the fact that lymphoid tissue is liable to be transplanted from the lingual tonsil into the base or lower half of the tonsillar fossæ. I fully treated this phase of the tonsil operation in a paper which I read before this section May 9, 1917, entitled "The Importance of After Treatment of the Tonsillar Fossa During the Secondary Period Following Tonsillectomy," to which I refer.

The prognosis, as regards non-recurrence of lymphoid nodules in the nasopharynx after the removal of the pharyngeal tonsil, is favorable; for a recurrence, to any material extent, is very rare, provided the adenectomy is skillfully performed. Most cases of recurrence can be charged to poor technic. The most common error which causes apparent recurrence is the failure to properly clean out the fossæ of Rosenmuller. Personally I have found two instruments which I prefer for the operation—La Force adenotome, for the reason it makes a clean cut, and usually removes all the central mass with the least possible traumatism; I follow this with my index finger (making sure that it is clean), and clean out the fossæ of Rosenmuller. I have found no other instrument so efficient and intelligent as the index finger for this part of the operation. Recurrence is occasionally seen after the most careful operation, but it is the exception.

It is indeed unfortunate that cases of tonsillectomies and adenectomies are not followed up more closely; for definite, reliable statistics, as to the results from these operations, are very meager. What is needed is for all operators to make a greater effort to obtain reports from their operative cases, and thereby be able to tabulate the permanent therapeutic results in the various indicated pathological conditions for the relief of which the operations were performed. These reports and observations of cases should cover a sufficient length of time to make them reliable.

I realize that it is a difficult task, and one which, so far, I have been unable to accomplish; but when these results are tabulated to any considerable extent, they will be of inestimable value to the profession.

In conclusion, I wish to state that I believe tonsillectomy and adenectomy are among our most valuable therapeutic aids, and I am not advocating their abolishment; but am only urging for a more painstaking care in diagnosis and prognosis, in order that in every possible case there may be no question as regards the indications for operating. And if this rule of carefulness is strictly observed, there will be a higher percentage of good results and fewer unnecessary operations.

DISCUSSION.

DR. A. H. ANDREWS (Chicago): To one who has been watching tonsils for a good many years, these papers become of great interest. Time was when the work of the tonsil operator, the man interested in tonsil questions, seemed to be that of trying to appreciate the deleterious effect of diseasd tonsils. I have read many papers on that subject in the late nineties and up to 1910. Along about that time, or a little earlier, Dr. Billings read his paper on "Focal Infections." That paper was copied in all of the English medical journals and translated into many other journals in many other languages, and a wave of tonsil surgery passed over this country that nothing seemed able to stop.

Some years ago, I had occasion to ask this question in the examination of a lot of medical students: Give the indications for removal of the tonsils. They named all the diseases that Dr. Burkhardt named and all the diseases that the other readers named, but one man summed the whole thing up in this: The presence of a tonsil. He proposed, whenever there was a tonsil present, that it was a good indication for an operation.

In recent years, the message in the papers written by specialists is care and caution and not to remove tonsils unnecessarily. I think that is right. I was glad to hear the papers and glad to hear them all emphasize the importance of not removing tonsils that should be let alone.

I want to, in just a word, emphasize the last suggestion made by Dr. Burkhardt. We have been doing tonsillectomies now eight or ten years. It is getting to be the time when we can take a child who is tonsillectomized at four or five years and follow that child through from five to ten years. If we can get five hundred or a thousand of those cases, and then get an equal number of children who have not been tonsillectomized, and make a comparison, you have information of real value as to what, in a large way, tonsillectomy does in preventing infections in children. That is an important field open to the work, it seems to me, of laryngologists.

SPINAL ANESTHESIA IN GENERAL AND GENITOURINARY SURGERY.*

GEORGE F. THOMPSON, M. D., AND JOHN S. NAGEL, M. D.
CHICAGO.

As an introductory remark I would state that my personal experience with spinal analgesia dates back about 10 years, and embraces approximately 1,000 cases. Stovain at first, then novocain, and for the past 8 months apothesine have been employed. Death could be attributed to the anesthetic agent in only one of my cases.

Spinal analgesia is not a new field but it is one in which much work is still to be done to determine its relative merits and its applicability to certain classes of cases in preference to general or local anesthesia. An American physician, J. L. Corning, was the first to experiment with spinal anesthesia and his findings were published in 1885 in the *New York Medical Journal*. He used 2 per cent. cocain solution and obtained anesthesia in both animals and man. He did no operations and did not even aim to inject the solution into the spinal canal, believing that if he introduced it into the nearby veins it would be carried into the cord but he must have placed it in the canal, otherwise the effects he noted would not have been so rapid and complete. His work did not stimulate any further researches and was soon forgotten until Quincke's description of lumbar puncture in 1891 led to the rediscovery of spinal analgesia and Bier used it on himself and the procedure was soon established more or less universally. Cocain was used exclusively in the early cases but the mortality was so high that the method dropped into disuse with the exception of certain clinics where efforts to improve the solution, the technic and the selection of cases continued until it was finally again placed on a stable basis.

Following the discarding of cocain, stovain was introduced by Fourneau and Tuffier in 1904 and is still in use. It has a greater paralyzing action on the motor nerves than any other agent and hence provides good muscular relaxation but is considered more dangerous for this same reason if it reaches and affects the respiratory nerves or centers. Novocain has been used but is not entirely satisfactory, while tropococain is the most

*Read at the Sixty-ninth Annual Meeting of the Illinois State Medical Society at Peoria, May 21, 1919.

popular at present and apothesine has only come into use during the past year or two.

The mechanics and physics of the action of the agent used depend upon certain features of the contents of the spinal canal and upon the curvatures of the bony framework. The cerebro spinal fluid has been supposed to move in and out of the canal, but while the pressure of the fluid certainly changes with position, it is doubtful how much of this is due to actual displacement of the fluid into the cranium from the spinal canal and vice versa.

If a fluid is introduced into the canal, of the same specific gravity as the spinal fluid, it will remain practically at the point of introduction, while a lighter fluid, if the patient is in the vertical position will ascend toward the head and a heavier one sink by gravity towards the lower end of the canal. If the patient is in the horizontal position the normal curves of the spine will influence the motion of the solution toward the head or the feet, depending upon the site of injection and the density of the solution. For example, the lumbar spine has a distinct anterior convexity and a heavy solution introduced at its most prominent point, about the interspace between the 3rd and 4th lumbar vertebrae, may gravitate either upward as far as the most posterior point of the dorsal convexity, approximately the 5th and 6th dorsal vertebrae, or downward into the sacral portion of the canal. If the patient is lying on one side or the other the heavier solution will accumulate along the dependent side as has also been demonstrated clinically in cases where the right lower limb has been rendered anesthetic while the patient was lying on that side while the left lower retained both sensation and motion. Hence the anesthetic solution will generally remain en masse at that area of the canal it reaches as the result of gravitation and will act upon the nerve tissues in that locality. Some diffusion of the solution along the canal for a considerable distance upward must occur however, judging from the frequent evidences of its action on the medullary centers even when the head and shoulders are kept considerably elevated. Since gravity so markedly influences the action of the anesthetic agent, solutions both lighter and heavier than the cerebrospinal fluid are used, depending upon the position the patient is to assume for the completion of the operation.

The physiologic action of the agent on the functions of the body depend on the drug used and on the strength of the solution. Shortly after injection the analgesia becomes manifest, first in the genitalia, perineum and inner sides of the thighs and then proceeds upward a variable distance and downward to the toes. The interval between the injection and the establishment of a sufficient degree of analgesia to permit of operation varies from 3 minutes to half an hour or longer. Anesthesia is seldom complete, pain sense being abolished, but tactile and muscular senses are often only impaired. Paresis or paralysis is present and the reflexes disappear. The blood pressure is generally markedly lowered and the heart action slowed and weakened while respiration may also be affected and symptoms of syncope or even of collapse in certain cases may appear. Palor, sweating, nausea and vomiting are not infrequent. The low blood pressure is due to paralysis of the vasomotor and intercostal nerves and the lowered heart action to the slow filling up of the heart, the blood being in the dilated internal vessels. The action on respiration is due partly to paralysis of the intercostal nerves and partly to the lessened blood pressure interfering with the blood supply of the respiratory center. Peristalsis is markedly increased by spinal analgesia and distention of the intestine relieved thus facilitating operative maneuvers in the abdomen. Death, when it occurs, is probably due to the action of the drug on the efferent vasomotor fibers supplying the splanchnic area which allows of an enormous collection of blood in the large venous trunks so that the patient is practically bled to death by this accumulation of blood in the large veins. Paralysis of the respiratory and bulbar vaso-motor centers may also be fatal. The use of oil and gum arabic as a solvent for the anesthetic agent to allow of slow diffusion has been tried but has not been very successful. Making the solution heavy by the use of glucose so as to prevent too much diffusion has been the most successful expedient.

The solution used by me during the past 8 months has been apothesine in distilled water in the proportion of 1 grain to 1 c.c. approximately a 6⅔ per cent. solution, which when further diluted with an equal amount of cerebrospinal

fluid makes a solution of between 3 and 3½ per cent. From 2 to 3 grains of the drug are used, depending upon the patient and the nature and duration of the operation. This solution is considerably heavier than cerebrospinal fluid and gravitates readily in the canal. About 200 operations have been performed with one death and two serious collapses with recovery. The list of operations performed includes amputations, varicose veins, neoplasms, arthrotomies, plastic operations, bunions, osteomyelitis, bone plastics, and aneurysms done on the lower extremities, hernias, varicoceles, hydroceles, amputations of the penis and hypospadias, one of which cases required operating for 2 hours; hemorrhoids, fistulae in ano, plastic operations on the vagina and perineum, dilatation and curettage which are about the most favorable types of cases as spinal analgesia gives complete relaxation and is free from the muscular spasm and straining so common with general anesthesia and the analgesia is easily obtained with low lumbar injections. Prostatic surgery is a favorable field, as Dr. Nagel will show, both on account of the usually poor physical condition of the subjects and the ease with which anesthesia is successfully induced. In abdominal surgery the perfect relaxation of the abdominal muscles and the absence of distention of the bowel make operative procedures easier and less manipulation of viscera necessary and postoperative gas pains are seldom severe or prolonged. Appendectomy, intestinal obstruction, and myomectomy have been successfully done several times, as well as gastro-enterostomy epiplopexy and operations on the bile passages. In intra-abdominal work pain is sometimes caused by traction on the viscera or mesentery and the use of gas for a few minutes has sometimes been necessary. Only one operation on the kidneys—a nephrectomy for tuberculosis, has been done and this was highly successful. The patient was a woman past 50 years of age, who was considered a poor risk for ether. One Caesarean section was done for eclampsia.

Failure to obtain anesthesia after apparently successful injection occurs occasionally, in 9 per cent. of cases, according to Allen. There may be incomplete or unilateral analgesia, or it may be of too short duration or may be delayed. The causes of the failure may be explained by idiosyncrasy, or by errors in technic or possibly by getting an admixture of blood in the spinal fluid.

The indications for the employment of the spinal analgesia may be stated as including all cases in which the lesion is below the diaphragm and in which the use of general anesthesia is contraindicated, such as the aged and debilitated, those with cardiac, vascular and kidney lesions, asthma, emphysema, chronic bronchitis and tuberculosis, diabetes, alcoholics, patients in shock not due to hemorrhage as for example in crushing injuries of the lower limbs and strangulated hernias.

Contra-indications are the presence of severe shock and hemorrhage where the blood pressure is already too low and cases where respiration may be too much embarrassed, e. q. marked emphysema, hydro- and pneumothorax, and empyema.

The dangers from the use of spinal analgesia are mainly the results of lowered blood pressure and the consequent effects on the bulbar centers, especially that of respiration. When the dose is injected into the canal it is irretrievable and its action cannot be controlled by withdrawal or by elimination. Lowering the head in order to direct more blood to the brain is not practicable because this allows the solution to gravitate toward the medulla and to further disturb the centers, while sitting the patient up to keep the solution away from the cranium may induce severe or fatal syncope, so that when the dose is too large or idiosyncrasy present a fatal ending is more immediate than with general anesthesia. The only solution is in the determination of the proper dose and the control of its diffusion by correct position before and after injection.

The mortality in my hands has been one in 1000. This case was that of a man past 50 years of age who was septic for several months from a chronic cystitis and pyelitis, and who had an enlarged prostate with 2 vesical calculi, a large inguinal hernia and an immense post operative hernia into which the bladder projected, and a well-marked myocarditis. He was given 3 grains of apothesine in a 4 per cent. solution and very quickly went into collapse and died in 25 minutes, apparently from respiratory paralysis.

Various authors give the mortality as varying from 1 to 200 to 1 to 1,800, which is considerably higher than is usually ascribed to ether. How-

ever, there can be no question that there are numerous cases unsuited to general anesthesia and in which the fatal outcome is attributed to shock after ether that could be successfully done under spinal analgesia. In comparison with ether the after effects of spinal analgesia are scarcely worth mentioning. Patients who have had both will invariably vote for spinal injection. Headache, nausea, vomiting, vertigo and syncope occur only occasionally and are of short duration. Pain in the legs and back are not frequent nor prolonged. Albumin has been noted at times. Incontinence and retention of urine are rather frequent, especially the latter, and the catheter has to be resorted to quite often and sometimes for several days or even two weeks in one of my cases.

Nervous symptoms and ocular palsies have been described as sequelae, but I have never seen either. Autopsies have not revealed any marked changes in nerve tissue except in experimental cases where lethal doses were employed.

Compared with local anesthesia by infiltration and nerve blocking, spinal anesthesia is undoubtedly more dangerous, but it is much simpler of application, more certain in its effects, incurs less patience and mental effort on the part of both patient and operator, requires a much shorter time and less discomfort on the table, does not obscure the anatomy of the parts and is followed by much less pain and suffering.

Several years ago I began the use of local anesthetics in my genito-urinary work, mainly because a large amount of work of a surgical nature had to be done upon patients who were bad surgical risks. My work was directed more particularly along this line to the removal of the hypertrophied prostate gland. These cases are always poor surgical risks, and under a general anesthetic the mortality rate was high, the patient passing away at the end of the third or fourth day from a hypostatic pneumonia, or a combination of pneumonia and uremia. I used in these cases the prasacral infiltration with results that were highly gratifying as the mortality rate dropped to a very low percentage, proving conclusively that the general anesthetic had much to do with the previous high death rate, as my technique was the same and the class of patients operated upon did not vary. In age they ran from 63 to 82 years. The anesthetic in all these cases was novocain or apothesine. Several months ago in conjunction with Dr. George F. Thompson we began the use of spinal anesthesia with apothesine. I wish to merely record my experiences in the genito-urinary cases. A total of fourteen patients received spinal anesthesia with one death. Ten of these were prostatics and four carcinomas or carcinoma papillomas of the bladder. In all of the prostatics the final step of the operation under spinal anesthesia was not undertaken until at least one week after a suprapubic cystotomy had been done under local anesthesia using the infiltration method except in one case. This patient was in very good condition and a complete operation was done under spinal anesthesia. The one death which is here recorded was an individual who in every sense of the word was a poor surgical risk. The second step was undertaken ten days after the primary cystotomy and he succumbed one-half hour after the operation had been completed. This patient had long been a sufferer from prostatic obstruction, and was very much emaciated and septic.

In all these cases the anesthesia was complete and ideal from the standpoint of the patient and operator. G. G. Smith in the Year Book of Anesthesia states that 5 to 10 per cent of spinal anesthesias are not complete, part of which, however, he believes is due to faulty technique. Excepting the death as previously noted, no bad results in the other cases were observed. The pulse rate and respiration did not vary materially. It has been noted that in spinal anesthesia there is always a fall in blood pressure and the death here recorded I believe was due to this cause, the fall being too great a strain for a heart that was already struggling under changes in the heart muscle due to a myocarditis of long standing. In this case I believe the parasacral infiltration would have had a greater percentage of safety for the patient. I believe that spinal anesthesia can be used or rather should be limited to the younger prostatic and individuals of advanced years with other bladder pathology, but whose circulatory apparatus has not undergone marked degenerative changes. The operator who is called upon to do genito-urinary surgery upon patients past the age of fifty-five years will find no one method of anesthesia ideal and suited to all cases. I have quite definitely abandoned general anesthesia in these cases, ex-

cept possibly in an occasional selected case. In parasacral infiltration and spinal anesthesia I believe I have two methods that will give these patients the greatest degree of safety using the spinal in the younger division and the parasacral in those cases of marked degenerative changes, in the circulatory system.

A GLANCE AT SOME OF THE OLD AND NEW THEORIES ON THE CAUSATION OF CANCER.*

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It is not my intention to consider all the causes which have been invoked to explain the origin of malignant disease, merely to glance at a few—especially several by laymen. It would be a striking example of poetic justice if one of them was fortunate enough to light on the cause, as did Schaudinn for that of syphilis.

Ehrlich once stated that the cancer problem will be taken by assault, but Gaylord in his address before this very society, believes it will be broken up into a great field, requiring many years of patient work of many investigators. This was barely four years ago, and "many years of patient work by many investigators" had already been done, though it is rather discouraging to think that we are not much nearer the cause than in the days of humoral pathology. Indeed, Ewing doubts whether we shall ever have more than a descriptive knowledge of the ultimate nature of neoplastic overgrowth.

I shall begin with the parasitic theory which is by no means new; for as long ago as 1801, Adams (of England) attributed malignant disease to what he dubbed the "carcinomatous hydatid." Andrewes points out an insuperable objection to this theory. These growths are of limited inoculability. This would seem logically to involve for each species liable to cancer, a private and particular variety of parasite, incapable of producing cancer in any other sort of animal. "Such a view is incredible in face of the close resemblance between these growths in different vertebrates."

Both vegetable and animal parasites have been incriminated. Welsh remarks: "The resemblance between the invasion of a cancer and other infective processes which had been compelled to yield the secret of their origin, fostered the expectation that the cause of cancer also would be found in some form of microbe." The enthusiasm excited by the discovery of the tubercle bacillus led to search for microbes in tumors also, and one of the most noted microbic causes in its day was Scheuerlen's bacillus, which proved to be a common variety, growing freely on sliced potato. I believe the latest claimant was the Micrococcus neoformans of the late E. Doyen of Paris, which, with its serum, is now solely of historic interest.

Several of the protozoa—those lowly organisms on the borderline between the vegetable and animal kingdoms—have been held responsible as well. So far back as 1891, bodies resembling microsporidia, one of the sub-classes of protozoa, were found in tumors and were likened by Pfeiffer, the authority on the protoza, to Plasmodiophora brassica, belonging to the subclass, and living in the roots of cabbages, beets, etc. Somewhat recently (1905) Robertson and Wade, in England, claimed to have discovered this same organism in cancer and been able to grow it from fresh carcinomatous tissue.

The "golden-yellow organisms" of Max Schüller turned out to be cork-cells from the material used in mounting the specimens. This explains why he discovered them in sarcomas, likewise in carcinomas. Though myxosporidia, another subclass, are supposed to be found only in cold-blooded animals, the late Prof. Jaboulay of Lyons was confident at one time that they were the cause of tumors, cancerous and otherwise.

There is no need of enumerating all the alleged parasites, but some mention must be made of transmissible tumors which afford considerable evidence in support of this hypothesis.

In 1911 Rous announced the finding in the domestic fowl of a sarcoma transmissible by the filtrate. The original tumor was markedly malignant as proved by its structure and by producing extensive metastases. The filtrate made cell-free by passage through a filter produced similar tumors by inoculation, though they increased much slower than by direct implantation. It also gave rise to metastases. Rous suggested transmission is either by (a) some minute parasite or (b) chemical stimulus. Since then he has found others, all sarcomata.

At one time it was debated whether such transmissible or transplantable tumors were true neo-

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plasms or not, but Ewing decides they are malignant tumors with certain peculiarities impressed on them by the species. They have been observed in the mouse, rat, hare, dog, and chicken; and Jones has recently added the guinea pig.

I pass on to a consideration of "cancer-areas" and "cancer-houses," both urged in support of the parasitic theory, the argument being, of course, that the causal organism is resident in such areas and dwelling places.

Haviland, in 1875, plotting the cancer deaths of females in England and Wales, concluded that in these countries the highest mortality is found along the lower courses of rivers flowing through low-lying valleys and which overflow at high water. He elaborated on this a few years later, and instanced the Thames valley as a marked example. His original essay was promptly challenged by Hirsch, who in his celebrated work, stated it could not hold good generally; in Norway, for example, cancer is found principally at considerable elevations and in the mountainous districts.

Leamington in the County of Warwick (England) is on a small stream which empties into the river Stour. Mason, after investigating 400 cases there, thought the ultimate cause will prove contaminated by sewage, and that it gains access to be a germ, the habitat of which is a subsoil through one of the mucous orifices of the body.

Urquhart, several years ago, corroborated Haviland's conclusions as to the Thames valley: All the districts immediately bordering on the river show a rate above the average for the whole of England. As the high rate is uniform on both banks, it suggests there may be a connection between the floods in the river and the cancer incidence, though exactly what is not easy of explanation. Presuming that cancer is of parasitic origin, the drying vegetation left on the banks after floods may form a favorable soil for growth of the parasite.

Some further evidence on this point comes from far-off New Zealand. While the mortality in general is the lowest in the world, the percentage of cancer deaths increased from 64 per 100,000 living in 1898, to 73 in 1907, according to Hislop and Fenwick. The former had occasion to treat 31 cases, some 6 of whom lived in the same house though not blood relations. The area was a flat district lying between a snow-fed river and a small stream, a large proportion being flooded every season.

Gordon and Thompson have recently furnished some negative evidence. Of the adjoining districts of Camelford and Launceston in the Duchy of Cornwall, the first has one of the lowest death rates in all England, and Launceston one of the highest in the southwest part of that country. They plotted all deaths during a 10-year period. Since it has been claimed: That cancer is relatively common in low clay levels along rivers which flood their banks, relatively uncommon on limestone, prone to occur among trees, and to recur in the same house—all these points were investigated. They found no special tendency to follow rivers, except as the houses follow them; nor any influence from the underlying rocks. Neither did they find any particular prevalence in wooded districts or single houses. On the other hand, they observed a marked tendency to "pockets" of cancer districts, though it is uncertain whether these are due to chance or not.

Bertillon also describes an enormous "cancer-area" which is referred to later on.

America is not to be outdone and is able to report "cancer-areas," as might be predicted in the older-settled portions of the country, where the conditions of living approximate those of Europe. An example is narrated by Tynes, from Fisherville, Pa. His practice averages about 265 families, and there were in 9 years 105 deaths, 18 or (17 per cent.) from cancer. Brookfield, N. Y., possibly the most celebrated "cancer-area" in the United States, with a population of 2½ times as much as Fisherville, had but 9.7 per cent. of deaths, nearly 9 per cent. less than in Fisherville. Neither heredity nor consanguinity were important factors.

Tynes gives further details of what he regards as the strongest evidence of the infectious character of cancer. In a city nearby, within six years there were ten deaths from malignant disease in a sharply defined area not much larger than a city block. In fact, five cases not only occurred in the same street and the same block, but in five adjacent houses, and the rest close by. Case 1, making 11 deaths in all, developed cancer 15 years before any of the others. She lived at the highest spot in the vicinity, and the drainage from her house was directly down grade and into five other houses in which cancer developed later. Only three persons were related, and they were

sisters and a son. Here also a history of heredity was lacking.

So much for "cancer-areas" as for "cancer-houses," while the occurrences about to be mentioned are probably fortuitous, they are striking nevertheless. In a hamlet in Shropshire (England) with 20 cottages, nine cases of cancer occurred in 15 years, according to Webb. Though none of the patients were blood relations, all the villagers used water from a roadside pump.

Power relates three deaths of domestics in the same dwelling: Miss B., aged 45, had lived in the house for 13 years and died from gastric carcinoma in 1884. Miss T., who had lived there for 20 years, at the age of 47, succeeded to the position held by Miss B., and occupied the same bedroom, she died the following year from cancer of the liver. Miss J., who had also resided in the same dwelling for 28 years, followed Misses B. and T., in the same bedroom, and succumbed to malignant growths in the breast and uterus in 1893. None of these women were related, and all appeared to be perfectly healthy when assuming the position.

During the discussion of Gordon and Thompson's paper, Ackerly said in Ashburton, in the southern part of Devon, he found an undue prevalence of cancer in the houses along a certain stream, in one three successive occupants, not blood relations, developed carcinoma. In Surbiton, in the County of Surrey, he knew of four instances where, in the previous 13 years, some eight or nine individuals long resident in the houses, succumbed to cancer. He suggested investigating the rats in such houses.

Another typical "cancer-house," and this time from Wales, is related by Simons. It is old, and so large it had sometime before been divided by a wall. Under this roof there were five deaths in 21 years, and but two were blood relations. This house is on the side of a stream, which, though often swollen by floods, is not sluggish, but the subsoil is often saturated.

An ingenious suggestion is made by Lazarus-Barlow, namely, that the greater frequency of cancer in certain houses or districts may be accounted for by the presence of some radio-active substance in the soil itself or the material of which houses are built.

The explanation offered by Rosenfeld for "cancer-houses" is that they are in poor repair, hence, patients, on account of their poverty, dwell in them. Now not all such houses are dilapidated, for Chapman saw three cases in a fine mansion, standing in large grounds; while Fabre quotes a case from Mollière: In a well built house at Lyons, on the banks of the river Saone, there were four deaths from cancer in ten years, and none from any other cause.

We come now to a much-debated cause for malignant growths as well as many other conditions —heredity.

Probably the most marked instance of this alleged factor is the family alluded to by Broca. This, it will be remembered, concerned a mother and four daughters, all of whom died of cancer; and of 18 grandchildren, 11 succumbed to cancer. Whiteford, recording a case of "conjugal cancer," furnished another striking instance of family incidence: The wife's father, two brothers, three aunts, and two cousins, all died from cancer.

In 1890 Arnaudet claimed that cancer is much more frequent in Normandy than in Paris. A large committee (35 physicians) was formed, and after due investigation reported that while cancer was unduly prevalent in some remote villages, and which they believed due to in-breeding and heredity, still in Normandy, as a whole, it is no more frequent than elsewhere in France. This point is referred to later by Bertillon.

During 18 years, Warthin examined some 1,600 carcinomas, proved such by histologic examination. Complete records of four families were available, and the incidence in them is so striking, that according to him, it can be interpreted as showing an inherited susceptibility. He believes also there is a marked susceptibility in certain generations and family groups, associated with an equally marked susceptibility to tuberculosis, and with reduced fertility. In a family generation the occurrence of multiple carcinomas practically always means they have occurred in a preceding generation. Moreover, the family tendency is naturally more marked when carcinoma is found on both sides.

However, cancer is so widespread that there must be very few families whose near or distant relatives have not been affected. In fact, Snow, in 1,075 cases of malignant disease (including 57 sarcomas), found a history of cancer in the parents in 15.7 per cent. Yet of 78 individuals in perfect health the family incidence was 17 to 19 per cent.

Gneinatz obtained similar results; of 210 can-

cers, there was a history of heredity in 18, of 166 benign tumors, a cancerous heredity was given in 11; lastly, of 103 adults without tumors of any kind, there was cancerous heredity in 12. A series of 500 males with cancer of the tongue, etc., and 500 females with mammary cancer at the Middlesex Hospital, were investigated from this standpoint by Hill and Tritsch, and they found 14.6 per cent. of the males, and 7.8 per cent. of the females gave a family history of heredity.

Menetrier estimates that a history of heredity will be given by about 13 per cent. of all subjects with cancer. DeBovis states that the percentage of cancerous heredity in the Belgian, German and Dutch collections of statistics is 16, 6, 17 and 18.1, respectively. All the foregoing relate to cancer in general, visceral or otherwise, but for squamous-celled epitheliomas alone, Heurtaux, of 563 cases under his care, tells us there was a history of heredity in 10.75 per cent.

Before leaving this phase attention may be drawn to Miss Slye's researches on heredity in mice. Since these animals were living under artificial conditions, and since we know so little of life processes in such short-lived creatures, the findings, while interesting, should be accepted with some reservation when discussing cancer of human beings. After an experience with 5,000 individuals, the results show cancer to be hereditary in the strict sense. The common laboratory infections spread through a given cage as well as to adjacent cages, not so with cancer. When an infected mouse dies and is devoured, every mouse in the cage is liable to be carried off by the same infection; this never happens with cancer. Cancer differs so inevitably that it can be manipulated—can be put into a strain, can be extracted out, or can be bred out of a line one side of which carried 100 per cent. of cancer originally. Finally, cancer is not transmitted as such, but rather as prone to follow a given provocation, probably in the form of over-irritation.

The older authors looked upon cancer as the local manifestation of a constitutional disease, a view resurrected lately. Consequently, they proposed to treat it by systemic measures—witness mercury advised by Boerhaave early in the 18th century; and hemlock by Stork later on. Early in the last century, the days of indiscriminate bleeding for every disease in the nosology, venesection was used by Broussais, that "prince of bleeders," and others.

From this viewpoint it was but a step to attribute malignant tumors to various constitutional disturbances. Thus, in 1899, Behla gave as his opinion that cancer is a parasitic disease which may be propagated in like manner to malaria; both these affections bear some relation to damp and marshy conditions. (This, it will be noted, was after the malarial plasmodium was discovered.) The following year he enlarged on this view, stating that the water of stagnant ponds or ditches which have forests or undergrowth on their banks is suspicious, and such water, with great probability, may be regarded as the bearer of the germ. Where cancer is "endemic" it is advisable that only boiled water be used for drinking, for washing domestic utensils, or to water gardens. Since cancer may also be derived from vegetables, salads and raw vegetables must not be washed with water unless boiled.

Boiling the water as a prophylactic is also recommended in a pamphlet recently issued by a San Diego physician. He believes the disease is due to water-borne parasites, and recites the usual arguments. Hence douches convey the germ to the uterus, and so on, though the gynecologists tell us some women go through a long life without ever knowing what a vaginal douche is. The Japanese form a stumbling block to this theory, for the author admits they bathe excessively, yet are little subject. This is accounted for by the fact that only hot water is used for baths, etc.

As a matter of fact, the cancer mortality in Japan is as high as in several European countries. This theory should explain the infrequency among the Eskimos. The anecdote may be recalled of the individual of that race who was given a cantharides blister, which had no effect, for it did not penetrate the various strata of dirt, and never reached the skin.

In 1901 Löffler proposed to treat cancer with injections of blood from malarial patients, as malaria and cancer are mutually antagonistic. Malaria is most prevalent in the tropics, and as it gradually lessens towards the poles, cancer increases, due to the fact that the natives in tropical countries have at some time in life been affected with paludal infections of severe type.

Coming from the co-discoverer of the diphtheria bacillus this is surprising. One of the most malaria-infected spots on the globe is Italy, especially the notorious Campagna outside Rome;

yet as Bertillon, also DeBovis, show, cancer is rare.

Kieffer, after extensive investigations in Cuba, comes to the conclusion there is no real antagonism between malaria and cancer, and that the course of malignant disease is not modified by the occurrence of malarial infection in cancerous subjects. He has had a varied experience in the tropics, and finds malignant disease relatively less frequent than in colder climates, though in this respect countries differ greatly.

One more systemic disease which has been thought to have some etiologic influence is rheumatism. Hislop and Fenwick in their paper already cited, point out: "So many of the cases were rheumatic, and rheumatism was so prevalent in subacute or chronic forms in bush districts, that we can hardly ascribe the coincidence of rheumatism and cancer to an accident." They likewise suggest: "It is not impossible to imagine that the circulation of the blood in rheumatic cases may act as a direct irritant to tissues." Bell also claims individuals with a tendency to rheumatism are more liable to cancer of the mucosa; he naturally advocates a non-operative treatment.

The dictum of Rokitansky, that cancer and tuberculosis are inimical to each other, has proved to be unfounded, cases of each in the same subject being placed on record from time to time, though—to be sure—the association is not very frequent. While Landis states that of 633 necropsies at the Henry Phipps Institute, a very small percent not being tuberculous, but one carcinoma was found in 15 years, and that in a patient free from tuberculosis; other institutions give a much larger proportion. Thus Lubarsch, in 6,536 cases, found 4.4 per cent. of tuberculous individuals were affected with cancer; on the other hand, 20.6 per cent. of cancerous subjects had tuberculosis. Bang, in a series of 6,000 necropsies on tuberculous individuals, found 16 per cent. of these had cancer as well; and Boinet in 800 necropsies, discovered cancer in 35, in 11 of which pulmonary lesions were present.

These figures are for the purpose of introducing the theory of McConkey, who states that the older writers noticed the striking analogy between cancer and tuberculosis. Since 1882, no one seems to have suspected the tubercle bacillus. As a result of several months' investigation founded on this hypothesis, he is convinced this organism is the cause of cancer by reason of its well-known effect of causing cell proliferation. In young and robust subjects, such proliferation is checked, as a rule, by an exudate of lymph as well as lymph cells, which surrounds the new growth and we have a tubercle. But in subjects whose reaction is not sufficient to hedge it in, a cancer is the result.

Syphilis, another member of the infective granulomata, has been incriminated by Curtis who writes that in the early 90's, among the patients treated for cancer, he discovered some with a symptom which he had demonstrated to be a clinical sign of syphilis, *e. g.*, the egg-skin eschar of the mouth and other mucosæ. He is warranted in the conclusion syphilis is the real cause, because in the succeeding 18 years he had found clinical evidences of syphilis in the majority of his cancer cases, and because antisyphilitic treatment improved all cases and even cured some when seen early.

Long ago Turenne advocated counteracting the virus of carcinoma by inoculation with syphilis, and I believe even carried it out.

Within the last few months DePury has given an interesting account of his experiences in Africa. In 1830 his grandfather emigrated to South Africa as a missionary among the Basutos, a tribe of Zulus, living near what was afterward the southern part of the Orange Free State. His father became a medical missionary, and in due time DePury himself, 50 years after his grandfather's arrival. In the meantime the habits of the natives had undergone great changes. The communal system with polygamy, had given way to monogamy through the efforts of the missionaries. Moreover, the discovery of the gold mines, with an influx of adventurers from all parts of the globe led to the introduction of syphilis, which was rapidly spread by the young men of the tribe who worked at the mines long enough to get a start in life.

Our author who saw several thousand patients in a year in his dispensary, was soon struck with the absence of malignant disease among the natives, though occurring in Europeans, and mentioned this to his father. The latter replied: "There is no cancer among the Basutos, I have been searching for it in vain for 25 years." At length DuPury saw adenocarcinoma and those rapidly-developing neoplasms which affect principally young individuals with hereditary or acquired syphilis.

A few months after the Boer War, he visited the hospitals in his vicinity, and the testimony was unanimous that while syphilis was diminishing in intensity probably on account of the total syphilization of the race, carcinoma was becoming more and more common. Moreover, among the Basutos cancer affects principally individuals from 30 to 40, rarely those over 50. The most common forms were the glandular type—adenocarcinoma of the liver, of the bones, and of the large lymph-nodes. Thus in less than half a century an admirably healthy tribe, of magnificent physique, with almost patriarchal customs, as a result of European influence, acquired first syphilis, then cancer, and lastly tuberculosis. A fine example, he remarks sarcastically, of the benefits of civilization.

The author, at time of his paper, was in charge of a French military hospital, and quotes Jaboulay, who asserted that any patient developing cancer before the age of 28 was syphilitic. He then had under his care an officer who showed the close relation between syphilis and cancer. The great-grandfather was syphilitic, and died at the age of 58 from cancer of the stomach. His wife, probably infected by him, also died from cancer at the same age. The grandfather, likewise syphilitic, died at 58 from lingual carcinoma, and the grandmother, from cancer of the breast at almost the same age. Thus 58 years was generally the fatal age, though the father is now 60. He likewise is syphilitic, obese (242 lbs.), and diabetic. The officer himself was syphilitic, entirely bald at 33. The father from whom the genealogic details were gleaned, stated other members of the family died from cancer, and pithily observed: "With us everybody is either cancerous or syphilitic."

DePury firmly believes not only that syphilis favors the development of cancer, but that the hereditary form is the fitting soil, admirably prepared and predestined—so to say—to a fatal cancerous degeneration. In conclusion, he remarks it is curious that of the three great plagues which in Europe since the 16th century seem to follow and complement and serve as lures for one another, two should be of parasitic origin, the other not.

If there is any foundation for the theory of the syphilitic causation, striking confirmation should be had from the Pacific Islands which have been a hotbed of syphilis for considerably over 100 years, as a result of the visits of whaling vessels. Both negative and affirmative evidence is to be had: Kieffer quotes Robertson as stating that cancerous disease is fairly prevalent in the Gilbert Islands, the inhabitants of which are darker than the Polynesians. At Fiji, the admissions to the Colonial Hospital for cancer in 5 years numbered four for native Fijians, and one for Polynesians; 1.3 and 1.2 per 1,000 admissions, respectively (Hoffman). The Fijians also are much darker than the Polynesians. At Tahiti, of 61 major operations in two years, according to Ortholan, there was but one for malignant disease, and that was a sarcoma; though in the Low Archipelago, not far away, of five deaths two were from cancer of the liver and of the uterus.

In China, too, Jeffreys and Maxwell state syphilis is met with from one end of the country to the other. Yet cancer is not unduly frequent. Of 34,197 new cases in the Tung Kuan Hospital, the percentage of malignant disease was only 0.5. While they operated on many cases, this is not to be wondered at considering the density of the population there. At any rate, cancer of the alimentary tract from the cardiac end of stomach to the last inches of colon, in their experience, is extraordinarily rare.

Kellert records a veritable pathologic museum in a woman, aged 39, syphilis, tuberculosis and cancer. It was thought the first was possibly congenital, the tuberculosis comparatively recent, and the cancer (of the pharynx) probably the last to appear.

Before taking up the final section, I propose to notice some more or less startling theories advanced by professionals as well as laymen:

It is just about half a century since Moore claimed cancer is more common in the first born, though pediatricians tell us the death rate from these in infancy is unusually high, owing to the inexperience of the mothers.

Professor Senn states in his work on tumors: While mental anxiety may favor the origin of carcinoma by impairing nutrition and thus impairing the physiological resistance of the tissues, we have no evidence that nervous influences exert a more direct effect. "It is different with dread or fear of carcinoma," he adds. "The writer recollects two patients who for no tangible reason were in constant dread of the disease for many years, when finally their fears were realized. Apprehensions of this nature must certainly exert

a positive influence on the etiology of carcinoma" (p. 236). The influence of mind on matter, indeed!

A French author, Noël, finds certain contagious tumor-like growths are often to be found on the trees in districts with undue prevalence of cancer. He even thinks there is some etiologic relation between these tree "cancers" and the same tumors in man, for the latter are common in persons living in or near woods. Insects have a special preference for the tree "cancers," and carry infection not only from tree to tree, but also propagate it through orchards in food for human beings. Mankind may be thus infected; and when the virus enters by the mouth, the resulting lesions are in the alimentary tract; the external parts, on the other hand, are involved by direct or contact infection. This theory would hardly account for uterine carcinoma. Moreover, he seems to refer to the galls on oaks and other trees; if so, they result from eggs laid by gall-flies, the resulting swelling serving as food for the larvæ.

Stuart-Dow, a laryngologist, is responsible for a novel theory. Sufficiently impaired function of the thyroid leads to the tissues being waterlogged, so to speak, with mucin, and the establishment of myxedema. As he has never observed cancer and myxedema at the same time, he suggests an excess of mucin in the tissues may insure against both carcinoma and sarcoma. With thyroid overwork, there must be a lessening of the normal quantity of mucin, both in the tissues and on the surfaces, and he believes this "hypomyxia" is the true precancerous condition.

Bashford quotes a "distinguished surgeon" as anathematizing the bedclothes and the discharges from cancer patients as dangerous sources of infection.

The first production by a layman to be considered is that of the embryologist Beard (of Edinburgh) who is a doctor, though of science, not medicine. His theory, which in his latest work he informs us was first announced for cancer in 1902, and for sarcoma in 1904—is that the "irresponsible trophoblast," as he is fond of terming it—is a sort of pathologic I. W. W., and runs wild like an opium-crazed Malay. The best way is to let him state his own case:

"At the critical period, the embryo, complete in all its parts, begins to nourish itself by an alkaline pancreatic digestion, and with a ferment known as trypsin. If this latter be wanting, the asexual generation, the trophoblast, may become a malignant tumor of the deadliest description; in its presence it becomes harmless and slowly degenerates. Clearly, then, since cancer is an irresponsible trophoblast, the ferment which brings about the degeneration of this in normal development ought to possess potency when directed against the cells of a malignant tumor." (p. 118).

While it must be confessed the development of chorioepithelioma appears to uphold his views, it seems strange that the pancreas which is to protect the body by secreting trypsin, should itself be attacked. As for the corollary of this theory, the trypsin treatment, Bainbridge gave it a thorough trial at the Skin and Cancer Hospital (N. Y.), and states emphatically it *does not* cure cancer.

It is amusing to note how the doubts which beset the profession as to the etiology of certain diseases are airily brushed aside by laymen. Thus Russell takes us into his confidence long enough to impart the following:

"All countries or parts of countries which use much flesh, beer, tea, coffee, etc., have an increase of cancer. Every country not using these or other irritating substances in excess have little or no cancer. . . . Rheumatism and heart weakness are favorable to the growth of cancer, and these maladies are largely produced by excess of food, and of toxins, such as tea, coffee, alcohol, beer, etc." (p. 3).

He seems to attribute about equal importance to the influence of "toxins," as he calls them, and that of ingesting food at too high a temperature. In this connection he made some observations and discovered that the temperature of porridge was 163 degrees, that of rice 168-176 degrees, and liquids as well as solids are habitually swallowed at 120-170 degrees, quite unbearable for the skin.

This recalls the observation of a medical missionary in China, Maxwell, I believe, that cancer of the esophagus and mouth is quite common there among the men, owing, he believes, to eating rice while quite hot; on the other hand, the women who eat later, after the rice is cool or even cold, are but seldom affected.

Green of Edinburgh, describes himself as a "former student of medicine." A few years ago he published some papers which now appear in a booklet. In these he claimed cancer is due to

some product formed during the burning of coal. He first took up Nairnshire, a county in the north of Scotland, which has the highest death rate in the country in the rural districts, while the town rate is normal. Of the four registration districts the cancer deaths were: 57, 13, 15 and 1, respectively. This last was a rodent ulcer, in a patient aged 81. The reason for the low rate he believes to be that only peat is burned. He claims malignant disease is unknown in Greenland where only oil is burned, but this is not quite accurate, as will be seen.

Later he checked his results by similar investigations in the Orkney Islands. Here the fuel is either peat or coal or a mixture, since there are no forests. Now in the districts where peat only is burned, cancer accounts for one death in 42; where coal alone is used, the proportion is 1.9. However, he found three districts where the death rate was very high though peat was the universal fuel. These results seemed unaccountable until the peat was analyzed, when—though it is supposed to contain no sulphur—it actually showed almost 1 per cent., considerably more than in many specimens of coal.

Green believes cancer production hinges on the sulphur in the fuel. Sulphur dioxid must be given off when sulphur is burned, and it is some compound of the dioxid which sets up cancer.

(In this connection, though not exactly germane, it may be recalled many years ago Law Webb proved that coal miners in England are practically immune to cancer.)

The last layman whom we shall quote, as well as the latest for his booklet appeared in 1917, is Lt. Col. Hildebrand, late of the Indian army. It is well known that retired Indian officials are peppery and our author is no exception, for failing to have his theories accepted by the profession, they should be "carefully sifted by a Royal Commission composed of judges, directors of life insurance companies. I would suggest that no doctors or so-called experts be allowed to be members of the Royal Commission." His views are that cancer is caused by drinking unboiled and hard water, which in due time hardens the lining of the alimentary tract. Given this fibrous tissue, cancer may occur if radium lodges in it. The radium in turn is derived either from the rocks whence the hard water is obtained, from lead pipes, or the corroded surfaces of boilers, etc.

Lead is believed to be one of the end-products of radium, not its source. The Colonel is by no means niggard with his theories, for another one is that bread made with yeast from fermenting spirit renders the individual bad-tempered, though if made from brewer's yeast, it soothes them.

I have left the large subject of diet mostly to the last because the vagaries of some of its proponents can be better understood by what has gone before, and because this theory carries with it some subtheories which cannot be very well considered apart.

So far as diet is concerned, is it some excess as a whole, or of some particular article of food, or of some adjuvant or condiment? Here there is a decided discrepancy of opinion.

The investigation on apparently the largest scale was carried out in 1911 by Bertillon, the celebrated chief of the Paris Bureau of Municipal Statistics. He drew up a map of France, with two squares, each about one-third of the whole country, one which embraces practically all of northern France, had a death-rate two, three or four times higher than the other on the south. The first much resembles the map showing the greatest consumption of alcohol, though Brittany, which is notorious for excessive consumption, is outside. He also points out that, generally speaking, countries bordering on the Mediterranean have only half as many cancer deaths as those further north (Denmark, Holland, etc.).

Bertillon remarks that with so sharply marked a geographic distribution there must be a cause, a single one and which preponderates over the others, but this he was unable to discover. In Paris, the increase in mortality is only in cancer of the stomach and rectum. Cancer of the mouth and breast have not increased. Those of the female genital organs are even diminishing.

Therefore, the causes are special to the digestive tract (except the mouth). Is there some article of diet more used now than formerly which causes the increase? Is it this food which affects the country in the north more than the remainder? Is it meat, and, if so, some particular kind? More meat is eaten at present and more in the north and the south of France. He tabulated the cancer frequency for a decade in 47 towns and the amount of meat consumed, and found that of 16 using little meat and having but few deaths, only two are within the fatal square.

The lower death rate among Jews has been at-

tributed by Fishberg to some peculiarity in their ritual laws on diet. As regards the non-use of pork, cancer, with the exception of carcinoma of the penis, is frequent among Mohammedans, who also abstain from pork. This exception is generally agreed to be due to circumcision. The Imperial Cancer Research Institute collected a number of examples among the Arabs at Khartoum.

While the Jewish race is less subject to cancer, it is by no means exempt. The late Sir. B. W. Richardson, of London, said he had noticed it comparatively frequently among his well-to-do Jewish patients. Bainbridge also states he has operated on many cases, and refers to a specific instance, but a sarcoma. Theilhaber, at the International Cancer Conference, reported that cancer is relatively frequent among the Jews in Munich, though carcinoma of the uterus is decidedly uncommon.

Kalgouf has even recorded what may well be termed a cancer "epidemic." In a small town with 1,500 inhabitants, 600 Gentiles, within a year he treated eight cases, seven in Jews, and but two with a history of heredity. During the previous 12 years he had not seen more than seven or eight cases altogether.

Bosc, of the University of Montpellier, France, has considered the influence of diet from a different point of view. In 1898 he stated that he believed cancer was due to protozoa, and five years later that affections supposed to be due to ultramicroscopic causes are, as a matter of fact, produced by protozoa. As the result of investigation of an enormous number of cancers, he claims in his latest paper (five years ago) to have found protozoa in all, but in different stages of development.

The prevalence of cancer is accounted for in his opinion by the widespread of protozoa in Nature. The sporulating (or resisting) forms are excreted in the feces of insects, and of most of the animals, both cold- and warm-blooded, associated with human beings or used as food. If dust laden with the feces of any animal serving as a host becomes lodged on the lips, or if one crushes an insect on the skin, a portal is opened for protozoa. Thus he continues, the gastro-intestinal tract is prone to constant traumata, especially since fish, mollusks, etc., used for food have hard parts which serve both as a vulnerating agent and as a mode of infection. He accounts for the great frequency of cancer in the alimentary tract by the use of raw or partly cooked vegetables and fruit, fish or flesh. In some parts of South America, *e. g.*, Uruguay and Argentine, cancers of the esophagus, stomach and intestine are extremely prevalent, claimed to be due to an excessive flesh diet.

After his pronunciamento, already quoted, Russell apparently has some misgivings, for he adds: "Flesh eating in itself, apart from excess or common adjuncts, is certainly not a large contributing cause, for the very moderate flesh-eating peasantry of Normandy, Norway Switzerland, South Australia, etc., have about the highest rates of all" (p. 163).

For many years, Bulkley, the well-known dermatologist, has been of the opinion that eating of meat produces cancer, and states he has treated both primary and recurrent cases by strict vegetarian diet with—so he claims—remarkable results. He likens carcinoma to psoriasis, which is characterized by epithelial prolongations into the corium quite comparable to the ingrowing masses of cells met with in the early stage of cancer. Again, cases of epithelioma developing from psoriasis are seen not infrequently. He has placed a number of cases on record where the lesions have disappeared entirely without any medical measures whatever, merely a strict vegetarian diet. In a somewhat extended tour of the Far East, during which hospitals in Japan, China and the Philippines were visited, with a total of many thousand patients, he was told "cancer was rarely seen among vegetarian peoples."

Nevertheless, cancer is not rare in Japan by any means—60 per 100,000 population; and as for the Philippines—or at least Manila—Dudley states that of 4,284 admissions to St. Paul's Hospital, 48 were for carcinoma, and 17 for sarcoma, while 27 cases of carcinoma and eight of sarcoma were inoperable. The total deaths in the city for a year were 7,613, of these 64 being due to cancer. Kieffer also states cancer is not uncommonly rare in the Philippines.

Bell, about the same time as Bulkley, advised a diet of uncooked food, nuts, and vegetables, with complete avoidance of meat.

One of the earliest advocates of the meat theory was the late Sir W. M. Banks, of Liverpool, in a discussion some 25 years ago.

Hoffman remarks if meat-eating, as such, were a definite cause of cancer frequency, the disease should be exceptionally common among tribes of

our Indians, who, to an unusual extent, live upon a meat diet. Yet of 886 deaths reported to the Census Bureau, only nine (1.02 per cent.) were from malignant tumors.

Another race which should be ravaged by cancer, on the meat hypothesis, is the Eskimo. Travelers tell us that practically the only vegetable food they obtain is from the partly-digested remains in the stomachs of muskox and reindeer, with some scanty supplies of scurvy-grass, and so on. Yet they seem immune, though a few deaths are reported by the Danish official physicians stationed in Greenland for many years past. Meldorf, for example, states that of 15,000 patients less than one per cent. had tumors, only a few of these being malignant.

The increasing prevalence of renal calculi in Switzerland has been attributed to diet also by Lardy, and while this topic is foreign to our subject, his opinions may be briefly referred to as showing the extreme views often held. After residing in Turkey for many years, he was struck on his return to Switzerland by the greatly increased frequency of kidney stones, and suggested this was caused by the much freer use of mutton. In 1880, about 1,650 tons were eaten, while in 1911 (the date of his paper), the amount had grown to nearly 8,000 tons. He claims that in other countries, such as Turkey in Asia, Russia, Hungary and England, where there are many calculi, the inhabitants also consume large quantities of mutton.

Ochsner, however, observes that India and China are two countries where stone is most common. India probably has the most cases, and an English author remarks, "one might build walls of calculi." Yet the Hindus are vegetarians, as are the Chinese. The frequency in England is confined principally to the eastern counties where it is supposed to be due to the hard limestone water.

In the English colony of Sierra Leone (West Coast of Africa), Renner finds the number of cancers, especially of the breast, increasing among the "creoles" or descendants of liberated slaves, due, he believes, to indulging in preserved and imported foreign fruits, sweetmeats, etc.; but absent or rare in the aborigines who live on their primitive food.

It is a disturbance of the potassium balance of the body which is responsible, so Ross claims. The spread of cancer is caused by the growing deficiency of potassium in our food and drink.

One of our common condiments is to blame, according to Robinson, who in his somewhat recent article gives figures to prove that the cause is to be found in the constitution of the blood plasma as evidenced by the frequency with which such organs as have a free blood supply are affected. The improvement, as a result of vegetarian diet, is due to the absence of common salt. Meat must be salted more than is normally found in the flesh of the animal, though meat contains a much higher percentage than ordinary vegetables. Salt must ultimately find its way into the plasma, increasing its saline content to a higher degree than the one in which the cells were intended to live normally. To produce cancer, the subject must have inherited an antipathy to chlorin, which he terms "chlorism," and likens to bromism and iodism, of the same chemical group as chlorin. The hereditary tendency may lie in transmitting this antipathy.

Robinson revives Braithwait's theory of 1901-2, which was that there are four factors originating the disease. Salt is the essential one, but without one and generally two more, does not operate; the others being excessive feeding (especially meat), senility of the cells, and local irritation. All four of these may be present. The freedom of Jews is due to their not eating bacon. Cancer houses prevail where there is room to keep a pig and the habitants eat bacon, and so on.

At the Cancer Conference, Schöne of Marburg, also stated sodium chlorid in large quantities seems to favor the proliferation of tumors.

According to Hewlett, on the other hand, the death rate among sailors and fishermen who use large quantities of salted provisions, is only 60 and 46 per 1,000, respectively. Moreover, many of us can remember when salt meat formed a large proportion of the diet in rural communities. This is largely a thing of the past, indeed, in the last 30 or 40 years, the facilities for obtaining fresh meat have already lessened the usual consumption of salt meat, yet cancer is increasing by leaps and bounds.

Of course, alcohol too has been dragged in, the late J. F. Payne alleging this as a factor in 1899. If we remember correctly, he was the medical referee for a temperance life insurance company. Any attack on his habits of eating and drinking perturbs the wellfed Englishman, and we are not

surprised at the following utterance from Mr. Owen:

"In these days when well-meaning, but overzealous persons are forever telling us that the chief part of our illnesses are brought on by our misdeeds, and especially by a moderate indulgence in what they are pleased to call 'alcoholic beverages,' it is somewhat of a comfort to find that the trout and the carp, undoubted water-drinkers are, with the rest of us, liable to cancer."

In fact, Heron of the Galton Institute, London, actually found cancer less common among inebriates than in the population at large.

Such are a few of the many theories to account for this fell disease. Some are absurd, others ridiculous; more than one are diametrically opposed to each other, yet several seem to contain a figment of truth. Some facts can be found to substantiate the parasitic theory, others as the famous "Kangri burns" of Kashmir, negative it. This leads me to ask if there is only one cause after all. As Rohdenburg and Bullock observe, the wide distribution of tumors in Nature speaks for the possibility they are dependent on general biologic phenomena, as opposed to some specific causal agent.

Cancers have been found in the warm-blooded animals and birds, in the cold-blooded reptiles, amphibians and fishes, and—according to Bashford—even the lowly oyster has been found to harbor a tumor. I believe it is evident that the same cause for malignant tumors in man must also hold good for similar growths in other vertebrates.

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REFERENCES.

Ackerly, R.: British Med. J., Aug. 30, 1913.
Andrewes. F. W.: (In "System of Medicine," Allbutt-Rolleston. London, 1905, i 627.)
Arnaudet: Normandie Méd., 1890, iv, 33.
Auzias-Turenne, J. A.: "La Syphilization," Paris, 1878.
Bainbridge, W. S.: "The Cancer Problem," New York, 1915.
Bang: (Quoted by Lapeyre.)
Bashford, E. F.: British Med. J., Dec. 9, 1905.
Beard. John: "The Enzyme Treatment of Cancer and Its Scientific Basis." London, 1911.
Behla, R.: Ztsch. f. Hygiene, 1899, xxii, 123.
Idem.: Deutsch. med. Woch., 1900, No. 45.
Bell, Robert: "Cancer, Its Cause and Treatment Without Operation," London, 1913 (p. 49).
Bertillon, Jaques: Presse Méd., May 13, 1911.
Boinet: (Quoted by Lajeyre.)
Bose F. J.: Presse Méd., Nov. 26. 1913.
Braithwait, James: British Med. J., Sept. 20, 1902.
Broca. Paul: "Traité des Tumeurs," Paris, 1866-9.
Bulkley, L. D.: Med. Record, Oct. 24, 1914.
Chapman: British Med. J., 1894, i, 1302.
Curtis, G. L.: Med. Record, July 4 1908.
DeBovis, R.: Semaine Méd. Sept. 24 1902.
DePury, G. A. C.: Paris Méd. Jan. 19,1918.
Dudley, F. W.: Jour. A. M. A., May 23, 1908.
Ewing, James: J. Cancer Research, January, 1916.
Fabre, J.: "De La Contagion du Cancer," (Thèse de Lyon, 1892.)
Fishberg, Maurice: "The Jews," New York, 1911.
Gaylord. H. R.: Jour. A. M. A., March 20, 1915.
Gneinatz.: (Quoted by Menetrier.)
Gordon and Thompson: British Med. J., Aug. 30, 1913.
Green, C. E.: Edinburgh Med. J., Oct., 1912, August, 1913.
Haviland, Alfred: "Geography of Heart Disease, Cancer and Phthisis," London, 1875.
Idem.: "The Geographical Distribution of Disease in Great Britain," 2d Edition. London, 1892.
Heron: (Quoted by Hoffman.)
Heurtaux, A.: Arch. Provinciales de Chir., Feb., Mar., 1903.
Hewlett, R. T.: Lancet, Mar. 22, Apr. 5, 1902.
Hildebrand, W. H.: "The Causes, Prevention, and Treatment of Cancer and Other Diseases," London, 1917.
Hill and Tritsch: Arch. Middlesex Hosp. (Cancer Research Lab.), 1902, ii, 104.
Hirsch, August: "Handbook of Geographical and Historical Pathology," London: (New Sydenham Society). 1884-6.
Hislop and Fenwick: British Med. J., Oct. 23, 1909.
Hoffman, F. L.: "The Mortality from Cancer Throughout the World," Newark, N. J., 1915.
Jaboulay, L.: Lyon Méd., Sept. 17, 1905.
Jones, F. S.: J. of Experimental Med., February, 1916.
Kalgouf, E.: Semaine Méd., Aug. 26,1908.
Keiffer, C. L.: Med. Record, April 27, 1907.
Kellert, E.: Jour. A. M. A., Nov. 21, 1914.
Landis, H. M.: (Quoted by Hoffman.)
Lapeyre, N.: Presse Méd., April 11, 1914.
Lardy, E.: Corr. Bl. f. Schw. Aerzte, May 1, 1911, p. 453.
Lazarus-Barlow, W. S.: British Med. J., June 26, 1910.
Löffler, F.: Deutsch. med. Woch., Oct. 17, 1901.
Lubarsch: (Quoted by Lapeyre.)
McConkey, T. G.: New York Med. J., Dec. 19, 1908.
Mason: British Med. J., Jan. 18, 1902.
Meldorf, G.: Nord. med. Arkiv. (Quoted in Jour. A. M. A., March 21, 1908.)
Menetrier, P.: "Le Cancer." (In "Traité de Médecine et de Therapeutique," Gilbert-Thoinot. Fascic. 18. Paris, 1913.)
Moore, C. H.: British Med. J., xxviii, 1865.
Noël, L.: Rev. des Mal. Cancereuses, 11, 1896-7, p. 137.
Ochsner, A. J.: "General Surgery." (Practical Med. Ser., 1918, ii, 540.)
Ortholan, M.: Presse Méd., June 26, 1909.
Owen, Edmund: British Med. J., Dec. 16, 1906.
Payne, J. F. Lancet, Sept. 16, 1899.
Pfeiffer, R.: "Die Protozoen als Krankheitserreger," Jena., 1891.
Power, D'Arcy: British Med. J., 1894, i, 1240.
Renner, W.: Ibid., Sept. 3, 1910.
Richardson Sir B. W.: (Quoted by Williams.)
Robertson and Wade: Lancet, Jan. 28. 1905.
Robinson, E. P.: Med. Record, Sept. 1, 1917.
Rohdenburg and Bullock: New York Med. J., Aug. 3. 1912.
Rosenfeld, S.: Wiener klin. Woch., Sept. 11, 13, 1913.
Ross, F. W. Forbes: "Cancer," London, 1912.
Rous, Peyton: J. of Experimental Med., April, 1911.
Russell, Rollo: "Preventable Cancer." London, 1912.
Scheuerlen, Deutsch. med. Woch., 1887, p. 1033.
Schöne, G.: Presse Méd., Oct. 5, 12, 23, 29, 1910.
Schüller, Max: Ctrb. f. Bakteriologie, xxvii, 1900: p. 511.
Senn, Nicholas: "The Pathology and Surgical Treatment of Tumors." Philadelphia, 1895.
Simons, R. J.: British Med. J., Jan. 30, 1908.
Slye, Maude: Interstate Med. J., July, 1915.
Snow, Herbert L.: "Clinical Notes on Cancer," etc., London, 1883.
Stuart-Dow, W.: Lancet, Oct. 16, 1909.
Theilhaber, F.: Presse Méd., Oct. 5, 12, 22, 29, 1910.
Tynes, A. L.: Jour. A. M. A., March 21, 1908.
Urquhart, A.: British Med. J., April 4, 1904.
Warthin, A. S.: Jour. A. M. A., Nov. 29, 1913.
Webb, T. Law: Birmingham Med. Rev., 1892, p. 342.
Welsh, D. A.: Scottish Med. and Surg. J., June, 1906.
Whiteford, C. H.: British Med. J., 1910, i, 1411.
Williams, W. R.: "The Natural History of Cancer," New York, 1908.

TUBERCULIN TREATMENT OF TUBERCULOSIS IN CHILDREN.*

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The facts established in the last twenty years as regards the course of tuberculosis in children have shown that children are gradually immunized unless the infection is too severe or too continuous. In many cases the bacteria are interned in glands and bones, rendering them localized for the time being.

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It is difficult to determine in what manner the so-called cures have taken place. Did the tuberculin that the tubercle bacilli distributed have anything to do with it? It is difficult to estimate the effects of tuberculin. In order to do this many cases under treatment will have to be carefully watched and an accurate clinical record kept of each one. We must also have control cases so as to be sure of our results. I have wondered what became of these many children that re-act to tuberculin tests and show but slight objective signs of the disease.

There have been but few changes in the therapeutic aspect in tuberculin treatment since Robert Koch's announcement. Robert Koch makes a distinction between primary and re-infections. The efficacy of tuberculin on tuberculous processes as a whole and its action on local tuberculous conditions are still as stated by Robert Koch.

Tuberculin Treatment in Children. As we all know, Koch was influenced in his use of tuberculin in the treatment of tuberculosis by his success in producing the healing tendencies which are manifested in cases of spontaneous recovery, evidently caused by resorption of certain material obtained from the tubercle bacilli as a typical example for the principle of active immunizing in acute infectious diseases.

The questions arising in carrying out the treatment of tuberculosis with tuberculin come under the heads of: 1. Immunization; 2. Treatment.

In treatment we are concerned 1, with the tuberculin preparation to be used; 2, with the manner of applying same.

As to the tuberculin to be used, Koch's old tuberculin still remains as good as any. Other preparations may be milder in their reactions, probably because more diluted. The principle that has been adopted generally in tuberculin treatment is a reactionless use of O. T.

Herbert Koch recommends the use of considerable fluid dilution for the tuberculin. He uses 10 c.c. and theorizes that it is necessary for specific treatment to diffuse the tuberculin in the lymph and blood so that proper resorption can take place. Through this means the tuberculin will come in contact with many cells and create a general stimulation to the formation of anti-bodies.

Koch is of the opinion that by bringing the tuberculin to many cells he releases the anti-bodies which are, almost without exception, found in cells. Through this method not only are cells activated to give up their anti-bodies, but the cells are trained to more active work. By giving small doses and increasing very gradually the power of these cells to render tuberculin innocuous is gradually increased. This view of Herbert Koch has not been given sufficient consideration in the use of tuberculin as a remedy. One endeavor on the part of many authorities is to produce severe local reaction, creating anti-bodies and these anti-bodies to be distributed in the system.

In following Koch's method, while there might be reaction at the seat of injection, it will be slight and of short duration—one to two days. A further detail: Do not repeat the injection at the same place. This is to avoid the possibility of an increased reaction taking place.

According to the researches of von Pirquet, then Koch's and Schiller's observations, it follows that if any part of the body has been in close contact with tuberculin, and in consequence had a specific reaction following, the reaction subsiding, on a repeated application of O. T., we have a much more severe reaction than if this tuberculin were applied to some other part of the system. This variation of place of injection of tuberculin is easily done and is of great advantage. You avoid the reactions following injections at the same place each time. The injections are made every four to five days.

Can tuberculosis be cured in children by using tuberculin treatment alone, or is it advisable to make conjoined treatment? Conjoined treatment is, by all means, advocated. Open air treatment, summer and winter, if the extreme weather does not interfere. It is questionable whether tuberculin treatment alone can cure.

The tuberculin treatment requires much of the system and must be closely observed. The slightest dose causes some reaction and this must subside before another dose is given. The more vigorous the body is the more easily these reactions are overcome, and this resistance is increased through general therapy. Sociological work is of great importance here. If the children can be properly taken care of at home there is nothing to stand in the way of ambulant treatment. Where the home surroundings and environments are poor and the people poverty stricken, we can

be certain that tuberculin treatment will be of little avail, but may be tried.

Technique.—The preparations for injections are simple. All preparations should be carried out under strictly sterile precautions. The different dilutions are made with normal salt solutions, various concentrations:

1 : 100 (Sol. A).
1 : 10,000 (Sol. B).
1 : 100,000 (Sol. C).

With these formulæ any required solutions can easily be made. The commencing (initial) dose is 1/1000 mg. O. T., the end dose 1 c.c. The end dose was reached gradually by increasing the dose given, requiring about 19 to 20 injections. The increase in dosage was about 3/2 of the preceding dose.

PIRQUET TABLE OF DOSAGE.

Number of Injections	The Amount of Tuberculin Given in 1/1,000 mg.	Amount of Fluid in C.C.
1	1.0	0.1
2	1.3	0.15
3	1.8	0.2
4	2.4	0.25
5	3.2	0.3
6	4.2	0.4
7	5.6	0.55
8	7.5	0.75
9	10.0	1.00
10	13.0	1.30
11	18.0	1.80
12	24.0	2.4
13	32.0	3.2
14	42.0	4.2
15	56.0	5.6
16	75.0	7.5
17	100.0	10.0
18	133.0	1.3
19	178.0	1.8
20	237.0	2.4
21	316.0	3.2
22	423.0	4.2
23	562.0	5.6
24	750.0	7.5
25	1,000.0	10.0

The injections are given in the back, seeking a different place each time, thus avoiding the local reactions. The skin is to be sterilized with iodine. Be sure that the needle is cut cutaneous.

Carrying Out the Treatment.—The initial dose is usually 1/1,000 of mg.; in certain cases 1/100 mg. The theoretical warrant for this dose is backed by the fact that a subcutaneous dose 1/100 of a mg. marks the lowest dose that will cause a reaction in a child responding to Pirquet. We commence our treatment then by giving 1/10 of this dose to be sure not to cause a severe reaction to those cases that are more sensitive. In using the solution 1/100 of mg. we cause some reaction, while by using 1/1,000 of a mg. we cause no reaction, it does not follow that we have not accomplished anything. On the contrary, we have affected the system in a definite manner.

The ground for using the mild or smaller dose is that we wish to remain under the dose that causes reaction so as not to cause too severe reaction in a more sensitive case and be compelled in some cases to stop treatment or to reduce the dose. In some cases even with a very small dose of tuberculin we may cause a most severe reaction, sometimes lasting for two weeks.

In some cases where the reaction was quite marked the initial dose had to be repeated four to five times before the reaction was no longer caused. In some cases we have had to stop the treatment on account of the intolerance of the child to tuberculin.

The choosing of a larger dose is not necessary because the initial dose can be very rapidly increased as the lack of reaction indicates. The final dose has been placed at 1 c.c. O. T. This establishing of the dose at so much is arbitrary, much more so than the initial dose, not having the same justification. I have given 1 c.c. without any reaction to speak of, and the tuberculous child stood it very well; in fact, the patient made a perfect recovery. I have not found an indication for a larger dose. As a last attempt I have several times given 1 c.c., but have not been able to increase this dose in all cases as the patients have not been able to work up to this dose.

The administration of tuberculin, as a rule, must be closely watched. If it is causing a good deal of reaction on the initial dose and on each successive increase of dose you will find that the patient will not be benefited by tuberculin treatment.

How many injections are necessary to arrive at a final dose? This depends on circumstances. At times a given dose has to be repeated several times before reactions cease and the patient has accustomed himself to the dose. In several instances we were obliged to stop the attempt at immunization. The reactions were constantly severe, and the influence on the patients of a distressing and harmful nature. The highest dose given a patient was 1 c.c. H. Koch reports one case where 2 c.c. was given. In one case eighteen injections were necessary before the final dose was reached. The number of injections necessary to reach this end dose varies with the reactions caused by an individual dose and the number of repeats necessary before no reactions take place. In other cases we can advance quite

rapidly in our treatment, requiring a much less number of injections.

In summing up the cases we found that but two or three of the whole number (22) were unable to stand the treatment, and we had to desist. This inability to stand the treatment can be easily determined. The end dose can be repeated any number of times, but there must not be too long an interval between the injections. How long we must continue to give the end dose is difficult to say, but depends a good deal on the condition of the patient.

Reaction. We expect and anticipate a reaction from every injection given for therapeutic purposes. These reactions affecting the tubercular localizations and the cells of the body (H. Koch). Years of experience have demonstrated to us that we must not cause too great a reaction. In some cases it may be necessary to cause some disturbance in order to carry out our treatment.

The reactions are general and local.

General reactions: Fever in first place.
Subjective symptoms.
Local reactions: The inflammatory state of local tuberculosis.

Fever Determination. As a rule we follow the temperature of a given case for two or three days, taking two hourly temperatures during the day and four hourly during the night, and thus get a given curve before commencing treatment. Tuberculin is now injected and the same procedure is followed. If in the next twenty-four hours we have a rise in the temperature of one to three degrees over anything we had during the preceding days, we reckon this as a reaction.

The fever, as a rule, subsides in a short time. In a few cases, however, the reaction is so sharp as to preclude any further treatment. In one case under treatment the treatment was followed by a rise of temperature up to 104 and this fever persisted with ups and downs for a period of fourteen days and was the cause of much anxiety on my part, but it finally came to normal. I very much feared a general dissemination of tubercle.

As a rule the reactions were more in evidence at the start. Once having learned the toleration of the patient, we could proceed accordingly without causing any further severe reactions.

We consider three points in the fever reactions: the degree of fever, the continuance of same, and the frequency of its appearance following injections. We consider the fever is due to the injection. As a rule the duration is limited to one or two days. Where the fever is of short duration general symptoms are not much in evidence.

What causes a severe febrile reaction?

1. Susceptibility of the organism.
2. A too strong tuberculin injection.

According to Pirquet the first is due to antibodies; the second to antigens. We have the measure of the antigen that we inject.

What is of great importance in treating with tuberculin is increasing the dose. When small doses are administered at given intervals it frequently happens that the succeeding reactions are increased. Giving increased doses at measured intervals has the effect of lessening the reactions. On account of this we can keep on increasing the dose. Any method that allows one to increase the dose keeping just below severe reactions and allowing rapid increase of dose helps us to end results.

In giving injections of tuberculin it is necessary to avoid a too concentrated solution. You may give the same dose of tuberculin as in a previous injection, but in a more concentrated solution and thus cause a violent reaction.

Subjective symptoms which, as a rule, accompany or are described as part of the general reaction, are seldom noticed in children—general malaise accompanying fever; headache accompanying fever. In a few cases under my observation we observed nausea and loss of appetite. Besides the general symptoms we find in certain cases following tuberculin injections a local reaction.

Under local reaction we understand a slight inflammatory condition of local herds of tuberculosis. Of course, this can only be observed around visible herd, skin tuberculosis, glands, etc. One case in particular where we had marked tuberculides over various portions of the body, showed marked areola and inflammatory irritations about each herd. In this case we gave 1/10 of mg. Internal tuberculosis susceptible to examination will give demonstrable evidence of reaction. Formerly when using more concentrated doses of tuberculin we had a greater degree of inflammation and sometimes troublesome sores resulted.

Results. We have the most diverse opinions concerning the value of tuberculin in therapeutics of tuberculosis. At one time the opinions were favorable to its value; at another time the reports

were unfavorable to its use. On the whole, now among men of large experience, the opinion prevails that tuberculin, when given properly, with a full knowledge of its uses, proves a valuable remedy in tuberculosis as a curative and ameliorating measure.

The use of tuberculin has been confined mostly to adults. The specific treatment of children with tuberculosis has as yet not been properly carried out. Many physicians are still skeptical as to the benefits of tuberculin treatment in children. In trying to determine the ground for their objections we ascertained that there were two main reasons constantly brought forward. Many stated that the giving of tuberculin to children is dangerous and can lead to serious damage. Secondly, that the results are not better than those accomplished by the common general treatment.

If these reasons are well grounded they would do away with tuberculin treatment in children. Tuberculin has been and is being used with good results in the treatment of tuberculosis in adults. Why can it not be used in children?

It may be possible that the manner and form of tuberculosis is different in children than in adults; that the reaction to tuberculin varies in children as compared to adults; but there certainly must be some way to overcome the physiological and pathological conditions in children to make us use tuberculin with the same good results that we achieve in adults.

My experience with tuberculin does not entitle me to say much, but does give me the right to bring this subject before you and ask for more work to be done in this direction. In reviewing the cases in which I have used tuberculin I have come to this conclusion, verifying the experience in adults; advanced cases are hopeless and in such cases tuberculin does no good; contrary, it makes matters worse.

Out of twenty cases, two children reacted very sharply to the minutest doses so that it was impossible to continue the use of the remedy. In a given number of cases we obtained no results and discontinued the use of tuberculin. With the exception of two or three cases my experience was too limited to pass on the use of tuberculin.

One of the two cases was an extreme case of tuberculosis affecting the peritoneum and cervical glands and the pharyngeal plexus. The tubercular peritonitis was extreme; the peritoneum so studied with tubercle, that is, 1/2 c.m. in thickness over the whole parietal and visceral peritoneum; the cervical glands were enlarged to size of a hen's egg to either side and retropharyngeal abscesses formed. This child was given up to die by several consultants. It had two laparotomies for abdominal symptoms. There were no lung complications. We started this child on 1/1,000 mg. and rapidly increased the dose so that in the course of three months the child was able to stand a dose .9 c.c. of Koch's old tuberculin. This child made a complete recovery and was exhibited to the medical society on two different occasions.

The influence of this treatment on the other children was of a general kind, increasing the appetites, increasing the general evidences of a more healthy condition. This cannot all be ascribed to tuberculin, as the children received the accustomed general treatment—outdoors, good nursing, good food, etc.

There is no doubt in my mind, based on what happened to the case just described, that the tuberculin was helping along. It is of influence on the physical and psychical appearance of the child. Children who, upon entering the hospital are pale and weak, show great changes, a better color, fresh and healthy, increase in weight. Increase in weight, while very desirable, is not always attained at the same time the child improves in health.

It is of great importance to subdue the fever. Absolute quiet, good food and fresh air in plenty, with the best of care in themselves achieve a great deal, but there is no doubt that tuberculin aids us also to influence the temperature.

The influence of treatment on local tuberculides is evidenced in diverse ways, dependent on the organ affected, whether the lungs, bones, eyes, etc. In the lungs the disease manifestations are dependent on the location of the disease and its freedom from restrictions—infiltrative form of T. B., chronic bronchitis, bronchial gland tuberculosis, and latent T. B. By latent form we understand that infection which is not discernible; that is, cannot definitely be located. We may have fever, night sweats, loss in weight, positive Pirquet, hereditary history, cough, anemia. These cases are positively helped by tuberculin treatment.

Children, the ages from three to nine, are those that are most frequently treated. In younger years we have miliary T. B., which

cannot be treated with tuberculin; the reactions are too sharp and the danger of further disseminating the tubercle too great. In the years three to ten we have more glandular affections and bone T. B., and the more favorable forms of lung T. B. In later years the lung affections approximate the form of tuberculosis of adults. While there is no doubt but that tuberculosis in the years five to ten is more easily affected by tuberculin treatment, owing to the localization of same being in more restricted forms, we must not overlook tuberculosis in the earlier and later periods.

How long is it necessary to continue the treatment with tuberculin? According to H. Koch, the length of time required to accomplish any effects depends on the localization of tuberculosis. For T. B. of lungs and bronchial glands his cases required twelve weeks average; some cases required thirty weeks; T. B. of pharynx and larynx, thirty-five weeks; T. B. of pleura (6 cases) seven weeks; one case of T. B. of peritoneum, ten weeks; my own case, four months; T. B. of bones, 11.3 weeks.

Indication and Contra-Indication. Severe affection of both lungs contra-indicate, severe degeneration of parenchyma organs, nephritis, etc. The reaction to tuberculin is also an indication as to whether we can continue to give tuberculin or not. Miliary T. B. and meningitis are also forms that cannot be given tuberculin.

CONCLUSIONS.

From the foregoing it is evident that tuberculin is of benefit in tuberculosis and can be given in many cases.

It was found necessary to work out some plan of giving the tuberculin; and as to the dose, this will evidently have to be elaborated, and will have to be based on more experience.

One fact has been established and that is that the dose of tuberculin must not cause a reaction. This has long been recognized in adults.

Tuberculin should be given in considerable dilution to prevent local reaction and reaction at the point of insertion.

The injections of tuberculin should always be made in different places to avoid local reactions.

The injections of tuberculin must be given within a limited time, five days interval.

THE SELECTION OF A PRACTICAL METHOD OF BLOOD TRANSFUSION*

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The constantly increasing volume of literature dealing with the subject of blood transfusion, its indications, dangers and varied technique, bespeaks the augmented interest in this subject, founded without doubt on its real value and utility in the absolute conservation of human life in certain conditions, and the amelioration of disease and the prolongation of vitality in morbid processes not amenable to cure.

The present era of discussion of modern methods of blood transfusion is but a revival of a subject as old, according to some, as the discovery of the circulation of blood by Harvey in 1652.

The conception of the rejuvination of the life and health of one individual by the infusion of blood from a healthy person appears early to have had an attraction to investigators to such an extent that they were tempted to use the crudest means to transfer the life-giving fluid from the healthy and living to the sickly and dying.

It is thus that we have as far back as 1492 a report, though not fully authenticated, of a Jewish physician attempting to save the life of Pope Innocent the VII by the transfusion of blood from boys. Better substantiated is the instance of Franscesco Folli in an attempted, though unsuccessful, effort along the same lines in 1652.

The first well-vouched for report of blood transfusion through an external carrying system was an experiment performed by Richard Lawer in 1666, who carried blood from a dog's carotid into the jugular of another dog by means of quills fitted together. Later by the use of silver cannulas he was enabled to carry blood from a sheep's artery into a man's veins, how successfully not being stated.

During the eighteenth century the idea was first suggested of a direct vein to vein anastomosis by Tardy and Harwood. In 1818 James Blundell of England drew the blood of a dog into a vessel and reinjected it into another dog

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by means of a syringe and a two-way cock and reported three successful cases.

In the period from 1830 to 1850 numerous varied devices were suggested and used with few successes and many failures, as they were all by the indirect means, surgery not having advanced to a point making aterio-venous anastomosis possible, and not having a known anti-coagulant at hand for either coating the conducting systems or for mixing with the blood, and depending entirely upon the speed of the operation to get the blood from the donor to the recipient before coagulation could take place.

Aware as we are today of the safeguards necessary to be thrown about the method one's astonishment is great that any case could have been successful.

To Crile, Carrel and others in less degree belongs the credit of pioneering in the direct arterio-venous methods, but which, owing to their delicate technique, must ever remain in the hands of those especially qualified.

It was in 1909 that Brewer and Legget first employed paraffin as a coating to the carrying system to prevent coagulation, and the first instance of the use of sodium-citrate mixed with the blood to prevent coagulation is that of Prof. L. Agote of Buenos Ayres in 1914.

Lewisohn of New York made the first scientific studies of the efficacy of sodium-citrate as to its value as an anti-coagulant and its non-toxicity in the human veins and the proper proportions in relation to these factors.

In 1913 Kimpton described his method of indirect transfusion by means of a paraffin-coated Brown's tube, which has become known as the Kimpton-Brown method, and it was in 1915 that Dr. Nelson M. Percy of Chicago published his simplified method of transfusion by means of a modified Kimpton-Brown tube which put the whole subject on a basis as made it possible for this exceedingly valuable procedure to become available to those of the profession possessing moderate surgical ability and technique without subjecting their patients to unwarranted dangers.

I have thus gone over somewhat in detail the history of the transfusion of blood to illustrate the value of the procedure as held in the minds of investigators and the profession at large, indicated by the persistency with which this exceedingly difficult problem has been studied and experimented with, as well as to show the constant endeavor to enhance the safety of the patient by reducing the complexity of the apparatus and to render the procedure more available by so simplifying the technique that the average well-qualified and equipped surgeon could utilize it with little danger to the patient and a small percentage of failures.

It was also in 1915 that Lewisohn of New York published the results of his investigations of sodium-citrate as an anti-coagulant, and it is upon the results of these researches that he has formulated his methods and technique of transfusion which, as a routine procedure, for simplicity and safety in the hands of the average man cannot be equaled in my belief by any method as yet advocated.

The transfusion of blood is attended by certain dangers as you all know, the avoidance of which is absolutely necessary to the patient and the success of the transfusion.

It is for the escape from or lessening of these dangers that the various expedients and techniques have been devised, and it is these accidents that the Lewisohn method appears to minimize to a greater extent than any other procedure.

While you are doubtless familiar with these potential accidents an enumerations of them may not be out of place.

First—Of greatest importance is incompatibility of the bloods of the donor and recipient as shown by the agglutination or hemolysis of the corpuscles of one blood by the serum of the other blood and which is to be avoided in large degree by appropriate laboratory or bedside reactions.

Second—The transmission of chronic or acute disease from one patient to another, which is to be avoided by a proper history and blood examination of the donor and which is eliminated as to recipient to donor by the indirect methods of Percy and Lewisohn.

Third—Acute dilitation of the heart, which is to be guarded against, especially in those suffering with myocarditis and requiring massive doses of blood and which is easily avoided in the citrate method by prolonging the time of infusion, but not so easily controlled in other methods where the time element is important and delay in infusion may result in premature blood coagulation and failure of the operation.

Fourth—Air embolism, which is easily avoided by proper care.

Fifth—Blood embolism, which is easily avoided in the citrate method by proper technique and proper mild agitation of the blood as it comes into the citrate, but not so easily avoided in other methods where potential coagibility of the blood is not altered by external means and actual coagulation, but awaits access to the air or a touch of foreign material to become inaugurated, and the life of the patient endangered or the success of the transfusion destroyed.

The technique of the citrate method as described by Lewisohn is as follows:

The outfit for a blood transfusion consists of two small glass jars, two large glass jars, two glass ampules containing 50 c.c. of sterilized 2.5 per cent solution of sodium-citrate, one large sized cannula for taking the blood from the donor, one small sized cannula for the injection of the blood into the recipient, one glass rod and a salvarsan flask with rubber and glass taper connection. The arms of donor and recipient are washed with soap, water and alcohol. If the veins are visible, iodine is to be used. A turniquet is applied to the arms, causing moderate distention of the veins. A vein in the donor is punctured with a cannula of large diameter. It is important to insert the cannula properly so that the blood runs through it rapidly in a large stream. If difficulty is encountered in the proper insertion of the cannula the vein may be exposed by a small incision. The blood is collected in a large glass jar. This glass jar contains half the quantity of sodium citrate needed for the transfusion. In other words, if 500 c.c. of citrated blood are needed we pour 25 c.c. of citrate in the large glass jar and add the residual 25 c.c. after we have collected 250 c.c. of blood. The blood is gently stirred with a glass rod to insure its proper mixture with the coagulant. After the collection of the required blood volume cannula and turniquet are removed and the wound sealed. The recipient's vein is then usually exposed by a small incision. The cannula of smaller calibre is introduced, the salvarsan flask attached to the cannula, and the citrated blood poured into the glass flask. As a rule, 50 c.c. of salt solution are run through the tubing in order to prevent air bubbles from getting into the circulation of the recipient. The technical steps for the injection are exactly the same as those for an intra-venous infusion of salt solution. The technical simplicity of the citrate method is based on the fact that coagulation of the blood during transfer from donor to recipient is absolutely prevented by mixing the blood with an anticoagulant, i. e., sodium-citrate.

Lewisohn further says:

The experiments which I published in 1915 showed that a very minute dose of sodium-citrate (0.2 per cent) is sufficient to prevent coagulation of blood for two days. Furthermore, these experiments showed the absolute atoxicity of such citrated blood for the human organism, even when large amounts of blood (for instance, 1,500 c. c.) are required in cases of profuse hemorrhages. The coagulation time of the recipient's blood is temporarily shortened.

As will be seen, the technical portion of the procedure resolves itself into a pure infusion of a non-coaguable material which is easily prepared as a simple mixture, the great requirement being a proper relation of the bloods and their proper handling.

SUMMARY

The choice of the Lewisohn method of blood transfusion by the citrate method as the most practical routine method is based on these conclusions:

First—It obliterates the danger of recipient to donor contamination.

Second—The preparation of the blood requires no unusual skill in withdrawing the blood, in mixing it, or handling it.

Third—No attention need be taken to the danger of premature coagulation after the blood is prepared from defective preparation of paraffin surfaces or delay in injection, as the blood is not affected by the condition of the walls of its container or the transmitting system and may be kept for hours before injecting.

Fourth—Blood may be taken from the donor and transmitted to the bedside of the recipient at a distance.

Fifth—The danger of hemolysis is reduced to a minimum as by the technique of injecting 10 c.c. of the blood and interrupting the current for a few minutes to note any premonitory systems of this catastrophe serious results may be obviated.

DISCUSSION

Dr. N. M. Percy (Chicago): I am sure that everybody has enjoyed the paper and the most interesting films which have been shown. As Dr. Snyder said, the most important part of a blood transfusion is the selection of a donor. The film shown, demonstrating the technique of the Rous-Turner method of determining the compatibility of bloods, was very interesting, but I imagine that most of you here feel as I do, and that is, we would have to have a good laboratory man to carry out that technique for us.

During the past few years I have been using the grouping method, as brought out by Moss several years ago, which classifies individuals according to the agglutionative properties of their blood.

Recently we have been using a simplified technique

of determining the Moss grouping as brought out by Vincent of Boston. By this method, the patient and donor can be grouped in a few minutes and without any special laboratory apparatus.

In using this method, one must keep on hand a little serum from an individual in group 2 and one in group 3, the test being made without separating the cells from the serum and without using any chemicals. A drop of No. 2 serum is placed upon one end of a glass slide and a drop of No. 3 on the other end. A drop of the blood which is to be tested is mixed in each of the serums and their action noted. If agglutination takes place in group No. 2 serum and not in group No. 3, the individual being grouped is group No. 3. If agglutination takes place in No. 3 serum and not in No. 2, the individual is in group No. 2. If there is no agglutination in either serum, the individual is in group No. 4, and if agglutination takes place in both serums, the individual is in group No. 1. The agglutination will take place usually within thirty seconds and practically always within two minutes and can easily be seen microscopically. If the reaction is slow and not very marked, and there is any doubt about agglutination having occurred, this can be determined with certainty by placing the slide under the microscope.

This method is so simple that a donor can be selected in a few minutes and without any laboratory apparatus. By carefully grouping the donor with the patient, the condition of hemolysis can practically always be avoided. There is a reaction independent of true hemolysis which frequently occurs following transfusions and varies considerable with the various methods of transfusions.

Of the various methods used, I think the citrate method will give the highest percentage of reactions. We do not know just what causes these mild reactions following blood transfusion. Undoubtedly some change always takes place in blood as soon as it leaves the giver and the most conspicuous change is that of clotting. The early changes incident to clotting are the appearance in the blood of abnormal proteins. The use of anti-coagultants do not prevent the early changes incident to clotting. They simply arrest the process. The citrate method does not prevent the early changes of coagulation, which undoubtedly accounts for some of the reactions following transfusions.

The experiments of Drinker and Brittingham, as carried out at the Peter Brent Brigham Hospital in Boston, are very interesting. They have demonstrated, first, that the cause of reaction following blood transfusion comes from some change in the blood cells, and, second, they have demonstrated that sodium citrate has an influence upon the red cells which makes them more susceptible to hemolysis. This they demonstrated by the following experiments. They drew off blood, defibrinated, washed the red cells, and added normal salt solution sufficient to bring it up to the same volume and reinjected. This gave them a mild reaction in about 20 per cent of cases. They then repeated the experiment, using exactly the same process, but in addition they added the amount of sodium citrate solution as used for transfusion, which gave them 44 per cent of reactions.

If the blood is not out of the body too long, and is not mixed with any foreign substance, I do not believe that there should be reaction in over 10 per cent of cases. By reaction, I mean a chill followed by temperature of 101 or over.

Dr. Grinstead (Cairo): Some years ago I read an address by the renowned Andrew Carnegie, that wonderful genius known to everybody, in which he stated that he had always been fortunate in that he had been able to select men to manage his business who were much wiser than himself. Now, in this instance, I have been able to do that stunt. Dr. Percy has been put on the program because he is an authority, not on the printed program, but you just heard him. My experience in transfusion has not been sufficient to entitle me to assume the role of an authority on the subject and therefore this little change in the program of this morning, which has been so very pleasing and so very satisfactory to all of you.

Dr. Snyder (Freeport): In regard to Dr. Percy's choice of methods of testing of compatibility of blood, I will say that the first film was put on, as I explained, accidentally. I entirely agree that the simplest and best method is the Vincent method, requiring far less technique and being much simpler. I simply described this as it went along because it was here in the screen. Of course, we all know that Dr. Percy's method of blood transfusion is very fine. I have used this method and absolutely have no criticism to make. The choice of the subject this morning, however, was the most practical method for the average surgeon or physician who has an occasional case.

The only difficulty that I have had with the use of the paraffin method is in the preparation of the tubes, and when I have some one that can attend to this sufficiently, or can attend to it myself, I have no criticism whatsoever; but this is the only part of the technique of the Percy method that has caused me any trouble and that has led me to occasionally, or perhaps in the majority of cases, use the method described.

A LITTLE JOURNEY TO THE HOME OF JOHN HUNTER.*

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In a purely scientific program I have thought that it is occasionally profitable to vary it enough to consider the influence that certain pioneers of medicine and surgery have made upon modern thought and investigation.

One of those pioneers was John Hunter, whose

*Read before the Pike County Medical Society.

name has shed undimmed luster upon science, as the years have come and gone.

I remember quite well, though it has been some years ago, sitting upon one of the public benches in the little park that ornaments the center of Leicester Square, London.

It was a day in early autumn when the grass was still green, but the leaves were beginning to fall and the flowers were fading.

There was no suggestion of fog and the mellow sunlight of the early afternoon made glorious the historic splendor of this famous square.

With guide book in hand, I was picking out the homes of men who had moulded the thought and shaped the destinies of this strong Anglo-Saxon race, in literature, in art, in science and in history.

Over there across the way was where Sir Isaac Newton lived, he who formulated for us the law of gravitation. In another old house lived Sir Joshua Reynolds, the great painter. Hogarth was still another inhabitant of this famous square and over near the corner in a big three-story brick house which looked as though it were three or four centuries old at least, lived the subject of my sketch—John Hunter. I read from my guide book: "John Hunter, the great surgeon and founder of the Hunterian Museum, now the College of Surgeons, lived on the east side of the square in such and such a house." Somehow as I sat and ruminated upon the career of this remarkable man, the historic past came before my mind and I could imagine and visualize the opening of that big, thick oak door of that old house and Hunter stepping out for his day's work.

Hunter was a contemporary of our own George Washington, and while our original thirteen colonies were fighting to throw off the yoke which was so sorely pressed upon them, the science of medicine and surgery was just beginning to take some form, as far as England was concerned, of a branch of science that had a very narrow foundation and was but little further advanced than a crude trade.

As a matter of fact, the barber-surgeons or blood-letters was the guild that immediately preceded the founding of the science of medicine and surgery and to Hunter chiefly we are indebted that he took our science out of the hands of these barbers and placed it upon a solid, firm and secure foundation, to grow as the years increased, and inventions and discoveries multiplied.

In France at the time, it was true, owing to the influence of Ambroise Paré chiefly, surgery had advanced further than it had in England. In Prussia it was a mere trade—one of the duties of the so-called doctors was to shave the officers of the line, of those who were fighting with Frederick the Great, in the Seven Years' War. This seven-year's war antedated our own war for independence by twenty-five years, and while these wars were in progress Hunter was slowly but surely bringing out of the chaos of scattered facts, observations, traditions and folk-lore, that order which was to be the basis of our present-day structure of the science and art of medicine and surgery. Chesselden and Pott, it is true, were the teachers of Hunter as well as his brother William and were famous as the outstanding representatives of surgery and medicine in its emergence from the chrysalis, but it is a fact that Hunter was the first man to place the science on its true basis of physiology, pathology and anatomy. In fact, he was the first pathological anatomist in any land and his museum of pathological specimens comprising some ten or fifteen thousand was given its place, later on, in the Royal College of Surgeons at Lincoln's Inn Fields. His monographs were numerous and many sided as was their author; many were lost, some stolen and some burned, but enough remained to indicate the daring originality and versatility of this remarkable genius. In the year 1761 he was attached as staff surgeon to the expedition to Belle Isle, and in this campaign is supposed to have gained his remarkable knowledge of gunshot wounds and war diseases, which experience was utilized to the fullest, in his investigations and teachings to his pupils in London. His was a busy life of investigation, teaching, experimenting and co-ordinating his observations, so that they have made a firm basis for modern science to rest upon. As an example of his industry, we may cite the fact that he dissected not less than 500 of the lower animals so that he was for his time, the world's foremost biologist and comparative anatomist. His acute observation of the collateral circulation in the horns of a deer, in one of the parks, is said to be responsible for his scientific treatise on aneurism, which rings true to even Twentieth Century science. He wrote on many subjects, many of them of epochal importance—inflammation, pyemia, phlebitis, intussusception, shock and various dis-

orders of the vascular system. His study and treatment of venereal diseases were exhaustive and exact, and his statements in many instances are in accord with present-day belief. He died in the year 1793 of angina pectoris, full of dignities and honors, having left to the world the priceless heritage of a well-spent life, an industrious career of unusual activities and original investigations, without equal of its kind; the founder of modern surgery on a scientific basis; and sharing with Paré, the Frenchman, and Lord Lister of our day, the honor of being one of the three greatest surgeons of all time.

He lies in Westminster Abbey, that Pantheon of the English Great, with those who have made immortal the Anglo-Saxon race through centers of the world, as well as the far-flung islands of the sea. Standing by the simple marble slab that covers his remains, which has only the words "John Hunter" upon it, it seemed to me that that was enough, it was not necessary to add to the epitaph. In his last sleep he has for his neighbors, great sea captains and admirals, explorers and colonists, great men of science, art, law, literature and music. Great names that we learned when we were children in school, those that have helped to shape the very language in which I am speaking and have added splendor and luster to English history for a thousand years.

"The immortal dead,
Who rule us from their urns."

THE FLIVVER AND THE FLY.

The automobile is a factor in community health and sanitation.

True, it is noisy and at times belches out fumes and odors which are anything but pleasant or agreeable. But properly handled, the auto, from a health standpoint, is a factor of safety. Why? "Flivvers" do not breed flies. Any alley fringed with a row of garages, once private barns housing the reliable old family horse, or the more aristocratic carriage and pair, is no longer breeding flies by countless millions.

The old time familiar and omnipresent open manure box has practically vanished from sight, even where barns and stables still exist. And as each manure box was an ideal breeding place for the dirty, dangerous house fly, the most exclusive resident districts of the city were by no means exempt from these nasty little pests.

The horse is a noble animal and has performed and is still performing wonderful service for man. But when it comes to fly production, any old family horse can be the direct means of producing more flies in thirty days than all the automobiles in the State of Illinois could produce in a hundred years.

When Mr. Jones' auto bumps into and seriously injures a foot passenger on the street, both the owner and the machine come in for a good, hard cussing from everybody. But when the same Mr. Jones kept a pair of horses in what is now his garage and the flies bred in the piles of stable manure which his horses produced, started an epidemic of typhoid fever in his locality, or killed a few of his neighbors' babies with dysentery, no one damned either Mr. Jones or his disease-breeding flies. You see, the people in those days did not see the connection between the alley manure pile and the sick baby only a block away.

Of course, with the light we now have, even with horses in as general use as they were before Mr. Ford flooded the town with his flivvers, people wouldn't stand for open manure boxes. Still, we must hand it to the auto as an agency that contributes to community cleanness; besides, as a medium for rapid transportation for private use, it has the good old family horse faded into the dim and imperceptible distance.

There is also another health side to the automobile—the big, outdoor, fresh air and sunshine side. But those who have automobiles know all about this. And as nearly everybody has an auto of some kind or other, there is no need of discussing the matter where there are so few people who would be interested.

Moral: A gasoline tank in the back yard is better than the open manure box in the alley.

SOME SUMMER DONT'S.

Here are a few Dont's which should help you keep well and healthy during the vacation and the hot weather period.

Don't go to a summer resort that has an unsafe water supply.

Don't go to a summer resort that uses milk that is not known to be clean or where the milk is not pasteurized.

Don't go to a summer resort where the toilet facilities are open to flies and otherwise unsafe.

Don't go to a summer resort where they dump their garbage in the open so it can be a breeding place for flies.

Don't go to a summer resort where flies are numerous and screens are few.

Don't go bathing soon after eating.

Don't get bathing water in your mouth while bathing.

Don't bathe in dirty water or near where drains or sewers empty.

Don't eat much meat in hot weather; eat more fruit and vegetables.

Don't drink ice water when you are warm or overheated.

Don't overload your stomach at any time.

Don't lose your temper or get angry. Keep cool.

You will be less liable to get sick if you read and heed these suggestions.

ILLINOIS MEDICAL JOURNAL

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AUGUST, 1919

Editorial

BY THE NEW EDITOR.

Beginning with this issue the ILLINOIS MEDICAL JOURNAL takes on new management. In assuming supervision the new editor takes recognition of the recommendations of the retiring editor regarding some desirable and much needed constructive work. Modesty forbids saying more than that the new editor is not unmindful of the many serious problems that confront the medical profession.

As a former president of the Society and for many years a member of several active committees of the organization and otherwise intimately in touch with the scientific, economic and other issues, favorable and unfavorable, effecting the profession, the editor feels that he is not wholly in the dark as to what is before him. Because of his previous activities for the betterment of the Society the editor feels that he is merely facing anew the ghost that stalks before him, his responsibility as Editor. The Editor accepts the responsibility in full. If he failed to accept it in any other spirit it would be ingratitude to the council of the State Society which selected him for the high position.

Medical affairs cannot remain stationary. Our organization cannot rest on laurels won or achievements gained. We realize that there are numerous "after-the-war" problems to be thought of and worked out. We realize that we are in the presence of a great social and economic upheaval, that nations are being made, unmade and remade. That the medical profession will to a great degree be caught in the sweep of forces beyond its control; that it is potent and responsible for the part it shall play in the new order of things. For all of us it is bound to be a strenuous time of readjustment; it is also an unequalled time for surveying the future of medicine and formulating plans for rational development.

What practical solution have we to offer and what attitude shall we assume in attempting to regulate those momentous activities that are shaking the foundation of our modern civilization and menacing the very existence of medicine as one of the liberal professions?

Demobilization means that 35,000 of the Doctors of America, one-fifth of the total number, the most virile and efficient fifth, are returning to their work after a year or more of intensive training. Most of them are temporarily unfitted to taking up general practice in the old way. They will find that the Red Cross diagnostic clinics, Boards of Health, the Life Extension Institute, the school nurse and other similar activities, are ready to take over a large share of their work.

They will find that under the Workmen's

Compensation laws the remuneration for most of their accident practice, is being taken over by the hospitals, while the insurance companies dictate the mite that they will receive for the little that does come to the office. Under the proposed health insurance law, while every care is to be taken that the employer shall pay as little as possible, that the employee shall receive as much as possible, little or no provision is made that the Doctor shall receive a living wage.

In the new order of things no consideration of self-interest is going to satisfy either the rank and file of the medical profession or the public they serve.

In the re-arrangement, medicine *per se* will more than ever be guarded not merely as a means of earning a livelihood, but as an essential service to mankind, so in this great problem of re-adjustment physicians should have as much influence as any other class in the weaving of the new social fabric.

If the world's work is to be done by collective bargaining and if we are to hold our own against the socialization of the profession, if we are to be something more than the hired man of the great insurance companies, or guide posts to the nearest specialist, we must be prepared to meet the situation or go into the discard. It behooves us therefor to bestir ourselves, to keep up with the changing times and do our part to help resist the unthinking drift towards radical innovations. Now, during this active reconstructive period, is the time to begin to weave our constructive fabric in order that our country should not be made safe for *Bolshevism*.

As individuals and as an organization it is well to realize the force of the many destructive agencies operating in this country today and for us to appreciate the need of a closer union of the profession, of a stronger organization, so that we may face these problems with the strength of many minds united.

No class can govern the world without the assistance of the Doctors. The war has shown that medical science is leading the van in all that stands for progress for the betterment of mankind. It is only necessary for the medical men to show a united front, to demand a proper recognition, in order to help direct the changing social order.

So with a thorough appreciation of the real situation and with a united alert organization on guard the medical profession may be able to secure the right and recognition of its merits, and also have that real influence necessary for the best interests of the profession and the public in the new order of things.

Having surveyed the situation as it pertains to the future of medicine in this country let us now take up the responsibilities of the editor, his limitations and the possibility of making the JOURNAL what is should be in order to best serve the interests of the profession.

The responsibility of the editor is divided between the editorial and the business conduct of the JOURNAL. Editorially, the responsibility is as to the source and the effect of the news which he prints. With the secular press, the slogan is "get the news," ways and means being a minor consideration. But the medical editor must first consider the source of the news and when he has gathered it must do what few secular editors bother about, he must verify it in every detail.

The Editor of a State Medical Journal in weighing the matter at hand for any issue must be mindful of the fact that while he is the defender of the profession he dare not become an aggressor. His duty is to convert those who are inimical to the organization and not to antagonize them further. He must always fight for right and justice, but he must not become a mere pugilist, battling only to amuse the sporting audience. In other words, he must adopt the tactics of a certain African missionary, who modestly confessed to his confreres in a Methodist missionary conference, that while the cannibals were waiting for the pot to boil, he converted them from heathenism.

A medical editor has very decided responsibilities even beyond these points. Still, though he holds a position of importance and accountability, by no means does he lead the procession of authority; he is accountable to the great medical organization of the State, and he must be most cautious not to trespass upon the duties and rights of others. Opportunity and temptation to do so may be frequent. But on occasions ideas of his own must be suppressed and his pen restrained from a word of criticism which it is not his place to give. It is not that

these limitations are resented by him but that the failure of the members, contributors and readers to understand them comes back to him in bitter criticism of himself and his work.

The responsibility of the Editor goes over to the business control also. Here, I fear that some editors have laid themselves open to a charge of neglect. One occasionally finds medical publications printing advertisements which even some of the higher grade of the secular press would refuse to handle. Nostrums known to be worthless are given admission to the advertising columns of some medical journals. There is a second consideration but so self-evident that it needs little emphasis. The advertising columns must never influence the editorial columns of a medical journal. Failing in this, the medical journal will immediately descend to the level of the secular press.

At the outset I wish to remind the members of our great organization that they are an integral and necessary part of the wide awake fraternity known as the Illinois State Medical Society. There should be no misunderstanding between the membership and the editor as to the difficult problems and responsibilities, the running of a State Medical Society imposes upon both. The members must not assume the "Let George Do It" spirit. Many heads are better than one and many tongues and eyes are better than one tongue and two eyes. One of the finest things about organization is that several people closely in contact for years can, if they will, benefit by each other's viewpoint of life.

Our JOURNAL is the official organ of a corporation with upwards of 7,000 stockholders, the editor having only a limited authority. He cannot make the JOURNAL what it should be without the co-operation and support of the members. The sooner the membership realizes that the JOURNAL is their publication and the sooner they are brought to appreciate that what they get out of it depends upon what they put into it, the better it will be for the JOURNAL.

To reach the ideal of perfection the Society must be an eye opener. A wide awake interest in the JOURNAL on the part of the members will soon bring all to realize the value of the bond, this monthly publication creates between the various County Societies, and the influence it has in helping to bind the entire membership into a more homogeneous whole.

Our Society cannot afford apathy or indifference to any degree or in any form. If we are sincere in our plans and aspirations for a better social order, we must begin by at once establishing our constructive policy and show an evmcing readiness to work harder and more harmoniously, for the sake of the newer ideals of professional betterment and social justice. There is no better method of doing this thoroughly than showing a mutual interest in the success of an undertaking that requires team work from first to last.

In addition to the medical problems mentioned by the retiring editor the new management in conducting the JOURNAL will strive for the following ideals:

To keep the profession informed of whatever is happening in medical circles in our own State as well as throughout the world.

To help federate and bring into one corporate organization the entire reputable medical profession of Illinois.

To create a better understanding among the profession of the many agencies seeking to engulf it.

To safeguard the enactment and enforcement of just medical laws.

To guard and foster the material interests of fellow members and protect them from imposition.

To prevent the enactment of laws giving quasi-medical organizations or individuals the right to practice medicine without proper qualifications.

To prevent the enactment of laws giving supplementary medical organizations mandatory or discriminatory power over hospitals or institutions owned and supported by medical men.

To convince law makers as well as governments, both National and State, that in our legistive halls and in State Department heads there must be more people who can see with the eyes of medicine.

To help maintain the standards of medical education.

To extend medical knowledge and advance medical science.

To educate the public in medical problems as they relate to the common good, to the end that

we may hope to reach the point where we can hand over to the public the responsibility of protecting themselves by appropriate laws. Certainly we should concentrate our energy on the enlightenment of the public in order that we may the sooner throw this burden on them rather than trying to carry it through ourselves.

To direct public opinion along proper channels in regard to the great problems of preventive medicine, to the end that the profession shall become more useful to the public in the prevention and cure of disease and in prolonging and adding comfort to life.

The new administration will be democratic in all that the word implies. Any other policy provokes and inspires reaction by some other class and would be out of harmony with the real purpose and ambitions of our organization.

The policy of the new editor on all questions will be to remain independent, not to be the mouthpiece of any individual or group and to work only for the best interest of the profession and the public.

While we should always present a united front to the enemy it would be erroneous to say that Doctors never disagree. It is impossible for everyone to view problems from the same viewpoint. Too, it is erroneous to think criticisms do no good. People seldom like to be told of their shortcomings, however, there is a real moral benefit to be gained by dignified criticism.

There may be times when members may think the editor's viewpoint is not what it should be. In this connection they should not forget that the rule works both ways. The sensible man takes heed of criticism and profits by it.

From time to time new conditions will arise; it may become necessary to criticise not only policies but individuals. Should this become necessary it will be done with a spirit of fairness and with the sole idea of bettering conditions and arriving at a better understanding of the proper solution of new problems.

Having outlined the extremely difficult path a medical editor has to travel, may I not ask for your help and co-operation in making the ILLINOIS MEDICAL JOURNAL the greatest and most influential of any of the State Medical Journals.

TO MEMBERS AND CONTRIBUTORS

It is expressly understood that articles contributed to the ILLINOIS MEDICAL JOURNAL have not been, and if accepted will not be, offered to another journal for prior or simultaneous publication; no objection can be raised for the subsequent reproduction of any of them. Although it is believed that reprinting or simultaneous reproduction of papers in readily accessible journals in a given field is professionally unnecessary, bibliographically undesirable and economically wasteful, however, if a contributor has a paper printed elsewhere subsequently to its appearance in the ILLINOIS MEDICAL JOURNAL (excepting a volume of society transactions), due credit shall be given for original publication. The editor relies upon all contributors to conform to this rule.

Manuscripts should be typewritten, preferably double spaced, and only clear verified copies presented. The name and address of the author should appear under title of the paper. Literature cited should be assembled at the end of a manuscript in numerical order and should be numbered serially. These bibliographic items in the list should be referred to, in the text, by numerals in parentheses corresponding with the sequence numerals in the list. Each item in this reference list should consist (in this order) of the (a) numeral indicating its sequence in the list, (b) name of the author, (c) year of publication, (d) exact title of the paper (or book) referred to, (e) full title of the periodical containing the paper, (f) volume numeral for that periodical, and (g) numeral for the first page (or page specially cited) of the paper.

All illustrations should be submitted in such forms as to admit of photographic reproduction without retouching or redrawing. Marginal letters cannot always be set in type and should, therefore, be written in India ink and regarded as parts of the original illustrations; or, in doubtful cases, the marginal lettering may be inserted temporarily, with lead pencil, for suitable attention by the editor. Unless specific instructions are given by authors, the printer will be requested to determine the degree of reduction that may most suitably be applied to illustration. Reproduction of illustrations can be effected most satisfactorily, as a rule, when the

originals are large enough to permit of considerable reduction in the plates prepared from them.

ABRAHAM JACOBI.

Dr. Jacobi, the Nestor of American Medicine, honored throughout a long life as few medical men have ever been died suddenly at his Summer home at Lake George, N. Y., July 10.

Born at Hartum, Wesphalia, May 6, 1830, he received his medical degree at Göttingen in 1851. Identified early with the revolutionary party in Germany he was arrested and imprisoned for two years. In 1853 he came to New York and in 1860 was called to the chair of pediatrics just established in the New York Medical College. From 1870 to 1902 he was professor of diseases of children in the College of Physicians and Surgeons, becoming professor emeritus in the latter year. In 1894 he refused an appointment to the chair of pediatrics at the University of Berlin.

A voluminous writer on medical subjects related to his specialty, he published several volumes and numerous articles which were collected and published under the title "Collecteana Jacobi" in 1909.

A member of numerous societies, local and national, he was honored by election to the presidency of many, including the American Medical Association, in 1912. The degree of Doctor of Laws was conferred on him by the University of Michigan, Columbia, Yale, Harvard and Jefferson.

WHY OSLERIZE?

On July 12 we celebrated the seventieth birthday of Sir William Osler, the man who a decade ago recommended that when a man reached three score years of age he should be choloformed.

Had Dr. Osler's theory been in vogue even for so short a time as the last century there is no way of estimating the loss to the world and posterity.

We notice in passing that some of the greatest work of Dr. Osler's busy career has been done since he reached his sixtieth year. Of the seven hundred and thirty books and articles published by him in the last forty-nine years one hundred and forty-three, or one-fifth, have been published in the decade between sixty and seventy, and this in spite of the fact that between the years nineteen fourteen and nineteen the world's greatest war made great inroads on his time and seriously handicapped his activities along literary lines.

The activities of Dr. Osler in the last ten years are inspiring to say the least and accentuate the spirit of the times and impress upon us the fact that there is no age limit and that the old saying, "a man is as old as he feels" is exemplified daily.

We, who have been through the highways and byways of life during the last five years and saw what is going on there, cannot agree with Dr. Osler's statement that people ought to be killed off at sixty. We insist that there is no age limit for service.

Dr. Osler's observation and experience during the last five years should convince him, that no longer are old men and women relegated to the rear to pine away the declining years after sixty, sitting in the parlor in easy chairs with pipes and knitting needles.

Throughout the ages these boys and girls past sixty have been in the foreground of existence and many of them on the firing line in the battle of life.

He who places stress on age limit for accomplishing things has only to look over the recent list of the names of men who played a conspicuous part in the world's greatest war:

Clemenceau (physician), seventy-eight; Woodrow Wilson, sixty-three; Foch, sixty-eight; Joffre, sixty-seven; Petain, sixty-three; Lord Kitchener, seventy-three; French, sixty-one; Colonel March, sixty-five; Admiral Sims, sixty-one; Arthur Balfour, seventy-one; Admiral Jellicoe, sixty; Earl Brassey, eighty-three; Colonel House, sixty-one.

Von Kluck, seventy-two; Von Hindenburg, seventy-two; Von Zeppelin, seventy-eight; Von MacKensen, seventy; Von Moltke, sixty-four; Kaiser Wilhelm, sixty; Admiral Von Tirpitz, seventy; Von Hertling, seventy-six; Count V. ZuChulenitz Czernin, Austrian Minister, sixty-two; Abdul Hamid II., late Sultan of Turkey, seventy-seven.

It has been frequently stated that the war could not have been caried on without these men. In previous wars men of the ages mentioned were left at home, but in the world's war these

men showed the staunch stuff of which they were made. In this last war age was of no moment. Elderly men and women who had been inactive for years came forward into service, led movements everywhere and made themselves indispensable.

In truth the matured mind in this great war was one of the biggest elements that played the winning part. Let us glance superficially over a few of the characters in other walks of life and review briefly some of the military leaders, statesmen, artists, sculptors, scientists, authors and actors who have played a leading role in life's drama and who achieved fame after sixty and many of them after seventy and still others who were at the zenith of their fame even after eighty years of age. Here are a few of the most conspicuous:

Lord Roberts in harness at time of his death at eighty-two; Wm. E. Gladstone, statesman, eighty-nine, did some of his best work after eighty; Elihu Root, head of American Mission to Russia, seventy-four; Cardinal Gibbons, noted prelate, eighty-five; Porfirio Diaz, president of Mexico, eighty-five; Marquis K. Inouye, great Japanese statesman, eighty; Count Sergius Witte, great Russian stateman, sixty-six; Sir Herbert Beerbohm Tree, sixty-three; Tzu-Hsi-an, Tiger Empress of China, seventy-four; Li Hung Chang, Chinese statesman, ambassador and soldier, seventy-eight; Prince Ching, Chinese Premier, eighty; Joseph H. Choate, eighty-five, a factor in America's life until he was eighty; Thomas A. Edison, inventor, seventy-two; Auguste Rodin, French sculptor, ninety-two, who did his greatest work in the last fifteen years; Rosa Bonheur, unrivalled French artist, seventy-seven, did her best work in the last years of her life; Mrs. Humphrey Ward, representative woman novelist, sixty-eight; Claude Dubussy, French composer, sixty-five; Leo Tolstoy, Russian novelist and reformer, eighty-two; Max Nordau, French physician and author, seventy; Sarah Bernhardt, celebrated actress, seventy-five; Wm. Winter, dean of dramatic critics, eighty; Giuseppe Verdi, Italian opera composer, eighty-eight; Jules Massenet, French composer of operas, seventy; Henrik Ibsen, Norwegian dramatist and poet, seventy-eight; Belva Lockwood, eighty-five, in harness until after eighty; Ella Flagg Young, head of the Chicago Public School system, seventy-three.

This list of great men and women illustrates beautifully the statement that it is never too late for success provided the will and desire are there.

As the Salvation Army wisely put it, "a man may be down but he is never out."

In view of the great accomplishments of these boys and girls, many of them past even the three score and ten limitation, we cannot help but feel that Dr. Osler spoke facetiously when he said that every one reaching the age of sixty should be cloroformed.

OUR HONORED DEAD.

"If ye break faith with us who die,
We shall not sleep, tho' poppies blow in
Flanders fields."

—McCrae.

The war is over and the soldier boys are rapidly coming home from France. Soon the great conflict will be nothing but a memory. And yet this brings home to every physician and medical organization, mingled feelings of joy and sorrow—joy that we were able to contribute so magnificently and effectively to the cause of liberty throughout the world, and sorrow that several of our physicians had to make the supreme sacrifice.

According to the Surgeon General's office, the fatalities among the medical officers up to May, 1919, were as follows:

Lost at sea	4
Killed in action	45
Died of wounds	26
Died of accident	5
Total deaths	80

A further statement, from the same source, gave a list of 290 medical men who died of disease while in active service. Therefore up to May, 1919, 370 Doctors made the supreme sacrifice for their country.

In paying tribute to the medical men, who gave their lives while in active service, one thought persists, "Greater love hath no man than that he shall give his life for another." We venerate the memories of those who paid in full, and we have the greatest respect for the others; all were willing to do whatever they were called upon to do, and many of them rendered most valuable service to their country.

PHYSICIANS KILLED IN ACTION.

Baldwin, Joseph F., 1st Lt., M. C.
Barber, Timothy, L., Capt., M. C.
Beasley, Shadworth O., Major, M. C.
Brown, Arthur S., 1st Lt., M. C.
Brown, Presley R., 1st Lt., M. C.
Clair, Frederick D., 1st Lt., M. C.
Craig, William F., 1st Lt., M. C.
Daniels, Hoddie W., Capt., M. C.
Dudenhoefer, Joseph E., Capt., M. C.
Fair, Wilford A., 1st Lt., M. C.
Finkelberg, Morris, 1st Lt., M. C.
Fitzsimmons, William T., 1st Lt., M. C.
Gochnaur, Orlando M., 1st Lt., M. C.
Hartwig, Gerhard F., 1st Lt., M. C.
Herrington, William G., 1st Lt., M. C.
Hudson, William B., Capt., M. C.
Jett, Richard L., Capt., M. C.
King, Emil, 1st Lt., M. C.
Leonard, Jerome M., 1st Lt., M. C.
Linch, Ballard C., 1st Lt., M. C.
McQuilan, James A., 1st Lt., M. C.
Morgan, Harold S., 1st Lt., M. C.
Murdock, Robert H., 1st Lt., M. C.
Oglesby, Knowles G., 1st Lt., M. C.
Post, Dana C., 1st Lt., M. C.
Reed, Stephen J. H., Capt., M. C.
Renner, J. W., 1st Lt., M. C.
Sanders, Frank B., 1st Lt., M. C.
Saunders, Alonzo W., 1st Lt., M. C.
Sherwood, Robert A., 1st Lt., M. C.
Skilling, John G., 1st Lt., M. C.
Summers, Davis K., 1st Lt., M. C.
Vermilyea, Sidney C., 1st Lt., M. C.
Webster, Harrison B., Major, M. C.

PHYSICIANS WHO HAVE DIED OF WOUNDS.

Bass, Urbane F., 1st Lt., M. C.
Beal, Howard W., Major, M. C.
Bull, William S., 1st Lt., M. C.
Burrell, G. O., 1st Lt., M. C.
Davis, Reese, 1st Lt., M. C.
Ellis, J. G., Jr., Capt., M. C.
Faulds, Winfield S., 1st Lt., M. C.
Frazier, Francis V., 1st Lt., M. C.
Gibson, Burgess A., 1st Lt., M. C.
Glascock, Alfred, Capt., M. C.
Goss, Paul Lewis, 1st Lt., M. C.
Hanson, Dave T., Capt., M. C.
Hilgard, George E., Major, M. C.
Joyce, Whitney H., 1st Lt., M. C.
Klingen, Oscar M., 1st Lt., M. C.
Lieser, William A., 1st Lt., M. C.
McMichael, Charles P., 1st Lt., M. C.
McQuaid, Arthur F., 1st Lt., M. C.
MacFarland, James, 1st Lt., M. C.
Marowitz, Max, 1st Lt., M. C.
Mead, Theodore F., Capt., M. C.
Mooney, Edward L., 1st Lt., M. C.
Olstein, Matthew F., 1st Lt., M. C.
Powers, Ralph E., 1st Lt., M. C.
Ranson, Glen D., 1st Lt., M. C.
Ray, John E., Capt., M. C.
Reed, Clinton V., 1st Lt., M. C.
Rosenwald, John P., 1st Lt., M. C.
Ryman, Herbert D., Capt., M. C.
Sage, Abner P. H., 1st Lt., M. C.
Shedd, Clyde Everett, 1st Lt., M. C.

This list is not absolutely accurate.

RED CROSS ARTICLES OF INCORPORATION.

1. The name of the Association shall be the American Association of the Red Cross.

2. The terms of its existence shall be for twenty years.

3. The object of the Association shall be:

First, to secure by the United States the adoption of the treaty of August 22, 1864, between Italy, Baden, Belgium, Denmark, Holland, Spain, Portugal, France, Russia, Würtenberg, and the federal council of Switzerland.

Second, to obtain recognition by the Government of the United States and to hold itself in readiness for communicating therewith at all times to the end that its purpose may be more wisely and effectually carried out.

Third, to organize a system of national relief and apply the same as mitigating the sufferings caused by war, pestilence, famine, and other calamities.

Fourth, to collect and diffuse information touching the progress of nursing, the organization of National Relief, the advancement of sanitary science, and their application.

Fifth, to co-operate with all other similar national agencies for the furtherance of the articles herein set forth, in such ways as are provided by the regulations governing such co-operation.

CONTEMPLATED AFTER-THE-WAR ACTIVITIES OF THE AMERICAN RED CROSS.

With the armistice signed and peace assured, the American Red Cross is terminating its extensive war activities and is making plans for the utilization of its strong organization and great resources in a program for times of peace.

There have been suggestions that the American Red Cross will undertake extensive public health activities throughout the United States with special emphasis upon child welfare, tuberculosis, and public health nursing.

Dr. Fred J. Taussig of St. Louis, as spokesman for the American Red Cross before the Chicago Medical Society March 5, 1919, said in substance, that the Red Cross having the money and the organization has definitely in mind the possibility of a health program in peace times. What Dr. Taussig said together with announcements which have appeared from time to time in the public press and coming from presumably authoritative sources, while they have been slightly conflicting in character, indicate that there is a movement on foot to take over in a large measure the work that legitimately belongs to the legally constituted public health agencies.

At the outset it may as well be understood that the Red Cross or any similar organization has not and neither can it acquire governmental powers; the State vests such authority only in legally constituted Boards of Health. The enforcement of all laws, rules and regulation bearing upon public health lies strictly within the jurisdiction of State and municipal health boards; any attempt on the part of self-constituted organizations to practice medicine or to attempt to regulate or enforce sanitary measures would be extra judicial and without authority. This is as it should be and any other arrangement will cause confusion and discord, and discord always brings about inefficiency.

Since the announcement of the preliminary program alluded to, and due no doubt to the definite stand taken by some of the more aggressive health officials, there has been a disposition to modify the original program. From some quarters it has been announced that the local health activities of the Red Cross shall not attempt to supplant public health agencies already established by law, but that the organization shall co-operate with present existing agencies.

Regardless of its attempt to do public health work legitimately under the jurisdiction of health boards it seems quite certain that the Red Cross will attempt to do a great deal towards developing a public service nursing, particularly in the local communities and in smaller towns.

It has even been intimated that the Red Cross will have one or more nurses in practically every community in the United States. There can be no question but that this great increase in the number of public service nurses can produce results and can be of untold benefit to the people, but the success of the whole enterprise will depend in a large measure upon the tact and judgment with which this nursing service is organized and upon the attitude which this nursing organization assumes towards the duly constituted health authorities and particularly its attitude towards the medical profession.

If organized on a State basis with the nursing service supervised by the State Department of Public Health and the nurses in the individual communities working in close contact and in co-operation with the local health officer, this ambitious peace-time program of the American Red Cross can add materially to the efficiency of public health administration throughout the nation. For the plan to succeed however, supervision by official health agencies is imperative. The promotion of health and the prevention of disease are furthered by broad campaigns of education and by the wise administration of restrictive laws. The extra-governmental health agency has proven a factor in educational campaigns, but to attain its greatest ends, the extra governmental agency must be under the supervision and direction of the official health organization which is charged with the responsibility for health activity and is endowed with legal authority to make its action effective.

Taken all in all, inasmuch as the Red Cross has no authority under its constitution to pay out money for peace time work and neither can it acquire governmental or judicial authority and therefore cannot enforce public health measures, it would seem that its activities along public health lines would result only in a waste of money and necessitate the duplication of work by the regular constituted health agencies, and

that therefor the proper thing for this organization to do would be to confine its activities to the legitimate sphere for which it is organized as shown by section 3, paragraph 3 of the articles of incorporation, namely: to apply relief in mitigating the sufferings caused by war, pestilence, famine, and other calamities.

STATE HEALTH OFFICIALS EFFECT NEW ORGANIZATION

Important Action Taken by Executive Committee in Chicago

Dr. Drake Honored with Important Appointment.

At the recent annual meeting of the Conference of State and Provincial Health Authorities of North America, held in Atlantic City, the following officers were elected for the ensuing year, excepting the secretary-treasurer who was elected for a period of three years: President, Dr. W. F. Cogswell, Montana; Vice-president, Dr. Charles F. Dalton, Vermont; Secretary-treasurer, Dr. C. St. Clair Drake, Illinois.

An executive committee charged with the work of carrying out the most important program ever undertaken by the state health executives and authorized to act for all the official state health organizations in the interim between the annual sessions embraces the following: Dr. S. J. Crumbine, Kansas, chairman; Dr. C. St. Clair Drake, Illinois, secretary; Dr. Matthias Nicoll, New York; Dr. W. S. Rankin, North Carolina; Dr. Eugene R. Kelley, Massachusetts; Dr. Arthur McCormack, Kentucky; Dr. James A. Hayne, South Carolina; Dr. R. M. Olin, Michigan; Dr. Ennion G. Williams, Virginia; Dr. W. F. Cogswell, Montana; Dr. Allen W. Freeman, Ohio.

The executive committee met in Chicago, July 27-29, and among other important actions taken were the following:

1. Development of a working program for the coordination of governmental and extra-governmental public health nursing services with supervision by the constituted health authorities, embracing in this plan the proposed Red Cross public health nursing service.

2. Development of a working program for the control of influenza, anticipating a possible recurrence of an epidemic the coming fall and winter.

3. Condemnation of the commercial showing of motion pictures dealing with sex diseases, especially venereal diseases, under the pretext of public education and urgently recommending the withdrawal of official sanction which may have been given to any such films by the United States Public Health Service and State and Municipal health authorities. The non-commercial showing of such films by regularly constituted health and educational authorities with strict observance of prescribed restrictions was commended.

4. In cooperation with the Council on Health and Public Instruction of the American Medical Association, first steps were taken towards the development of a plan for consolidating the federal health agencies in one department and the enlargement of the scope of federal health activities to meet modern demands. A survey of the entire field of federal public health activities was authorized as a preliminary step.

WHY WE REPEALED THE DENTAL BIENNIAL RGISTRATION LAW

To the Editor: Regarding the repeal of the registration clause in the Illinois State dental law, I will briefly state:

1. How it became a law.
2. Why it was enacted.
3. How it operated.
4. Why it was repealed.

Ten years ago, because the dental profession was infested with illegal practitioners, quacks, and glaring advertisers, the Illinois State Dental Society prepared an amendment to the dental law which became Section 14. This provided for a biennial registration and the payment of a registration fee not to exceed one dollar. All licenses became void unless dentists registered with the Secretary of the Illinois State Board of Examiners.

Provision was made for restoring a license upon payment of a fee of twenty dollars, etc.

Our State Board of Dental Examiners hereby obtained a new and clean record of the licensed dentists in this state, and secondly raised funds sufficient to employ investigators and legal counsel to locate and prosecute illegal practitioners and quacks.

No great criticism developed because of the law—it very materially assisted in "cleaning up" our profession and helped place it on a higher plane. Occasionally good men were "caught" because of neglect to re-register.

The dental profession was content to tax itself for the benefit of the people of this state as long as the funds raised by this special tax inured to its special benefit.

Several years later a law was enacted which provided that all monies raised by taxation go into the general fund of the state treasury.

The budget system was inaugurated and the expenditures of our Board of Dental Examiners were curtailed to the extent that for the few years intervening between the enactmnt of this law and the establishment of the consolidation act approximately $8,000 in excess of the funds required for administering the law was paid by the dental profession into the state treasury.

Then, too, under the code which created the Department of Registration and Education which administers the laws of the regulated professions, trades and occupations, the expense of administering the dental law should be decidedly minimized.

A clean record, up to date, of the licensed practitioners is in the office of the Department of Registration and Education.

That department issues every new license and consequently can keep a perfect record. Dentists who leave the state, to practice in some other state, obtain certain credentials from the "Department"; thus it can keep in touch with changes from this source and correct its record. The illegal practitioner or quack is usually located by some neighbor and such neighbor is generally the cause of "bringing him to time."

The Illinois State Dental Society and its component organizations can and will assist the department in keeping a record of those who leave the profession. There was absolutely no valid argument that was or could be produced to combat our bill asking for the repeal of the biennial registration feature of the law.

It is with regret that I here note that the Department of Registration and Education did strenuously oppose our efforts,—but the excellent work of Representative Jones of Springfield, who introduced this bill, and Senator Clark of Chicago, who was its sponsor in the Senate, sustained by the efforts of the officers, committees, and entire membership of the Illinois State Dental Society, caused this bill to pass without a single dissenting vote in either the House or the Senate.

In spite of this unanimous and decided victory, let it again be noted that the Department of Registration and Education still opposed its becoming a law.

Director Francis W. Shepardson, however, in the last hours before the time limit, withdrew his objections.

Section 14 is repealed; it passed both houses of the legislature without a single dissenting vote and was signed by the Governor. The dentists of this state are free from biennial registration and special taxation. It was a clean, just and victorious fight on a principle which involves all the professions, trades and occupations,—the laws of which, the Department of Registration and Education administers,—the dental profession of Illinois is deeply grateful to the physicians for their energetic protest to the enactment of a bill which would have imposed upon the medical profession alike unjust taxation with its other evils,—and hereby expresses its appreciation and thanks for all they did.

G. Walter Dittmar,
President, Illinois State Dental Society.

Note.—The doctors of Illinois congratulate the dental profession on their victory. In writing finis to this phase of autocracy, we say: Spare us, oh Lord, from further administration of laws from the dream book and from the schoolmaster in politics.

OUR HEALTH INSURANCE COMMITTEE AGAIN COMPLIMENTED

Medical Society of New Jersey. Journal of the Medical Society of New Jersey

New Brunswick, N. J., July 12, 1919.

To the Editor: We have a committee of our State Society studying Health Insurance, and I recall the fact that the best report on that subject was given by your State Society committee a few months ago. I have mislaid my copy of it. Could I possibly secure additional copies of your committee's report for our committee to examine?

Yours cordially,

D. J. English,
Editor.

Committee on Social or Health Insurance of the Illinois State Medical Society:

Ed. H. Ochsner,	Joseph Fairhall,
George Apfelbach,	S. V. Balderston,
C. A. Hercules,	Cleaves Bennett,
W. F. Burres,	E. W. Fiegendaum,
Henry F. Bunting,	W. D. Chapman,
Chairman.	*Secretary.*

KEEP YOUR OLD NARCOTIC LICENSES

The natural tendency is to destroy an old license when a new one is issued. In view of the fact that Internal Revenue inspectors lately have asked several druggists to show their narcotic license of 1916 or 1917 we would urge that if you still have these old licenses you hang on to them like grim death.

It will be well to report to the President or Secretary of the State Society or the editor of the ILLINOIS MEDICAL JOURNAL if you have any trouble in this respect.

THE MEDICAL PROFESSION IS EASY

REPEALING OF THE SODA WATER TAX BUT NOT THE UNJUST NARCOTIC DRUG TAX ON PHYSICIANS

Congress has repealed the tax on soda water fountain drinks, and the editor is reliably informed that the Theatre Owners' Association of the country have secured the promise from a sufficient number of the members of the Senate and the House of Representatives to secure the repeal of the war tax on theatre tickets, this being wholly a tax on amusements.

You haven't noticed the repeal of the law which taxes doctors three dollars a year for a public health measure which should be paid by the public.

There is a reason, and here it is: Political power pursues the line of least resistance. The medical profession offers the least resistance. An inferior, insignificant, active minority impresses a legislature far more than a superior, inactive, influential majority. A majority of members of Congress believe that the ethical physicians and surgeons are indifferent, inactive and inoffensive in political and legislative affairs. Hence, they put any old thing they desire over on the doctor.

Why should this be? For some unaccountable reason physicians almost universally feel that matters of public interest, even if vitally important to the medical profession, are contentious affairs, into which physicians have no right to enter; and the result is that the medical profession is obliged to take what may be left when the scramble is over. Looking at the matter from the viewpoint of a past neglected duty one gets the impression that when something is about to be handed out, the mob thinks the medical profession is easy.

A NORMAL SHOE FOR A NORMAL FOOT

Can the shoemaker build a shoe that will keep normal a normal foot? And having built it, will the public be brought to see the beauty of the product?

The Chinese woman with her bound foot excites the derision and pity of the self-complacent Occidental. The American woman with her ridiculous imitation of a horse's hoof excites the derision and contempt of the observant Oriental.

Not so many years ago we gave our admiration to the small, tightly laced waist. Today we laugh at it and tomorrow we shall be equally amused by the pencil-point toes and high heels that tilt the human foot to the angle of a horse's hoof.

Dame Fashion, however, brooks no criticism, so we are told, and neither reason nor health is concerned in her mandates. Yet the Dame must look to her own laurels or she will find herself outlawed by her quondam willing slaves; for the war made low heels beautiful on Fifth avenue and consequently on our own Michigan avenue. If it had lasted a little longer women would, of necessity, have gone the whole way with the shoe problem. The shoes of the future will not be "prescription" shoes; they will not cater to deformities, but they will be built to conform to the normal lines of the foot.

As a result of examination of various groups of girls in different occupations, made in an endeavor to promote health among women, the fact has been forcibly demonstrated that an overwhelming number of women are wearing shoes which with narrow-pointed toes, inflexible shank, and in most cases high heels, pinch the foot, cause bad posture, and so incapacitates the wearer for freedom at work and necessary normal exercise,

all of which affects the general physical condition.

The national board of the Young Women's Christian Associations, through the health division of the Bureau of Social Education, has started a drive to get the normal shoe for American women and to popularize it. The associations have all the health arguments. They have a national membership of four hundred thousand women to listen to them, but they cannot get this shoe without the co-operation of the manufacturers and dealers who make the shoes and determine the styles. To bring about this co-operation, a conference with leading shoe men was held recently at the National Board Y. W. C. A. headquarters in New York.

A proper shoe for man or woman should embrace the following features: A low, broad heel, a snugly fitting heel, an inner edge straight from heel to great toe, room for spread in the metatarsal arch when weight is put on the foot, and a snug arch.

"It is about time such shoes were made in popular quantities and prices, and when they are made physicians should urge their universal wear. Why not get some modern ideas of beauty and health into Dame Fashion's superannuated cranium, and give American women an opportunity to cease imitating the Chinese women and the horse of 4,000 years ago?"

SAD BUT TRUE

The following comment under date of July 17, 1919, sent to the editor of the *New York Times* and signed "Educator," is worthy of special mention as it is illustrates beautifully the trend of the times:

FAILING MEDICAL SCHOOLS

SHORTAGE OF PHYSICIANS WILL MAKE ITSELF FELT A FEW YEARS HENCE

New York, July 17, 1919.

To the Editor of The New York Times:

The article in today's *Times*, discussing the possible suspension of the Medical Department of Fordham University, illustrates how well the author has placed his finger on a very interesting topic. Any educator who has watched the good work of that school in the last few years must have felt the same depression as that of the editor.

In the classes of 1918 and 1919 the graduates of that school have the best record of any of the larger schools in New York State, as determined by the Regents' examinations.

The reason for the failure of this school, as well as for that of many other schools of medicine, is the relatively high cost of education. The cost to the student of a medical education five years ago was practically the same as that of today. Even at that time medical education was reckoned on at an average loss of upward of $200 by American universities. Today money is worth half or one-third of its value at that time and yet the cost remains the same.

Educators have not raised their tuition fees in medicine because they felt that it was a great hardship even at the present time for the average student of medicine to pay the bare $250 that covers his annual fees.

The vast majority of those studying medicine are poor boys with little or no financial backing. Rich men's sons seldom study medicine—the work is too hard—the hours are too long—and the returns are not commensurate in a financial way with the effort. The poor boy, on the other hand, by reason of his surroundings of sickness and poverty becomes absorbed with the desire for its betterment. As a result of the high standards of education imposed the annual supply of doctors has steadily decreased.

The American Medical Association has shown that thirteen years ago upward of 13,000 new physicians were licensed to practice each year. Last year 4,175 were licensed. Two years from now not more than 3,000 can be graduated. Whereas, during this period the population of the United States has increased more than one-third—in addition, the demand for individual medical attention has more than doubled.

The cost of medical education has increased because the law requires a larger number of full-time professors and assistants.

According to the information at hand, Fordham University lost over $325,000 on its Medical School. The war depleted its other income, so that without an endowment the school could not go on.

It may not be known, but more than three-fourths of all the professors in any medical school receive absolutely no money for their work. It is done because they like to teach. Fordham was no exception to this rule, except that there were fewer paid professors than elsewhere.

The shortage of physicians will not be appreciated for a few years and then conditions analagous to the present housing trouble will occur, when medical service will be at a premium.

You have sensed the poor boy's position. It is a distinct loss to the city that this suspension should come at the present time. Many of these boys will be unable to continue the study of medicine because they live at home, and this has made it possible to make the burden less.

Upward of two-thirds of all of the students of medicine, in this as well as in other large cities, have their homes in the city where they study and can only take up medicine because of that fact.

Philanthropists seldom have an eye to the possible benefit of medical education—yet from a broad stand-

point there can be no philanthropy with broader possible end results—because, after all, the greatest study in life is the study of life itself.

POST-GRADUATE MEDICAL INSTRUCTION IN AMERICA

One of the results of the war of immediate interest to the medical profession in America is the changed condition with respect to post-graduate instruction in medicine.

The medical institutions of Europe, like its inns, were organized to accommodate all classes of students. Some well prepared men entered the universities, compiled with the usual admission requirements, presented a satisfactory knowledge of the language of the country and became candidates for the higher degrees. On the other hand, a great army of general practitioners annually applied for post-graduate instruction who really desired "brush-up" courses. Owing to the deficiencies in their early undergraduate education they were attempting to receive "higher" education in subjects of which they were ignorant of the fundamentals.

The great medical centers of the United States, Philadelphia, New York, Baltimore, Boston and Chicago, meet the demands for our medical men in much better fashion than did Germany.

In the graduate departments of the great universities may be found opportunities for the qualified student for intensive work in the special fields of medicine and allied sciences under the tuition of men who have made a name in the world for American science and American methods; and in separately organized courses, a general review is offered to practitioners.

GREEK KING DECORATES AMERICAN NURSES

Eight nurses have been decorated by King Alexander of Greece with the Medal of Military Merit for their work in fighting the typhus epidemic in Macedonia. The eight nurses were:

Miss Sara Addison, Baltimore.
Miss Marie Clauber, Chicago.
Miss Alma Hartz, Davenport, Iowa.
Miss Isabelle Martin, San Francisco.
Miss Emily Porter, Bridgeport, Conn.
Miss Clarissa Blakeslee, Drexel Hill, Pa.
Miss Edith Glenn, Bristol, Pa.
Miss Florence Stone, Plainfield, N. J.

One of the nurses, Miss Blakeslee, was herself stricken with typhus during the epidemic, but has entirely recovered.

In making the presentation, King Alexander spoke feelingly of the ravages of typhus in Macedonia, and his gratitude to his American allies for their work in combating it. Addressing the nurses and the General Staff of the American Red Cross, the king said:

"I want to thank you for what you have done for Greece and for humanity in your work in Macedonia. First of all, you saved from starvation tens of thousands of Greeks who were repatriated from Bulgaria after the armistice. Then your doctors and nurses extinguished the typhus epidemic, which was threatening Greece and all the near East, from the Greek Island to Aegean. You fed and clothed thousands and you stamped out typhus and other diseases among thousands of Greeks refugees from Asia Minor. I shall always remember with gratitude what the American people have done through you in our hour of need. I bid you today, on your departure for Roumania, good-bye and good luck!"

After the ceremony, the American minister presented to the king two of the members of the Red Cross Mission, Maj. Burke C. Hamilton, of Goshen, N. Y., and Maj. Robert Bruce Wallace, of Cleveland.

BELATED RECOGNITION OF MEMBERS OF DRAFT BOARDS

Suitable recognition for members of the medical advisory draft boards is provided for in three measures recently introduced in Congress. A bill introduced by Senator Henderson of Nevada authorizes the President to award brevet commissions and suitable medals to the physicians who assisted in the draft. Senator Randall of Louisiana has introduced a similar measure, as has Congressman Kahn of California, but the Randall and Kahn measures do not provide brevet commissions. In addition to appropriate medals, the thanks of Congress are extended. It is fully expected that one of these measures will be passed at this session, but it is not believed likely that brevet commissions will be favored.

NOTE.—Appropriate recognition will be much appreciated by the thousands of doctors who did efficient work on the draft boards, even if it does come at this late date. Most agencies active during the war were given appropriate recognition instanter upon the signing of the armistice.

UNITED STATES PHARMACOPOEIAL CONVENTION OF 1920. DELEGATES TAKE NOTICE

Article VIII, Chapter I of the By-Laws of the United States Pharmacapœial Convention provides that the president "shall issue, on or about the first of May of the year immediately preceding that of the decennial meeting, a notice inviting the several bodies, entitled under the constitution to representation therein, to send delegates to the next meeting. He shall repeat the notification, eight months later, and shall request the medical and pharmaceutical journals of the United States to publish the call for said meeting."

Article II of the constitution provides: "The members of the United States Pharmacopœial convention, in addition to the incorporators and their associates, shall be delegates elected by the following organizations in the manner they shall respectively provide: Incorporated medical colleges, the medical

schools connected with incorporated colleges and universities; incorporated colleges of pharmacy, and pharmaceutical schools connected with incorporated universities; incorporated state medical associations; incorporated state pharmaceutical associations; the American Medical Association, and the American Chemical Society; provided that no such organization shall be entitled to representation unless it shall have been incorporated within and shall have been in continuous operation in the United States for at least five years before the time fixed for the decennial meeting of this corporation."

Section II of the constitution provides: "Delegates appointed by the surgeon-general of the United States army, the surgeon-general of the United States navy, and the surgeon-general of the United States marine hospital service, the secretary of agriculture, the secretary of commerce and labor, the Association of Official Agricultural Chemists, the Association of State and National Food and Dairy Departments, the National Wholesale Druggists' Association, and the National Dental Association, and by the organizations not hereinbefore named which were admitted to representation in the convention of 1900, shall also be members of the corporation. Each body and each branch of the United States government above mentioned shall be entitled to send three delegates to the meetings of this corporation. But no such delegates as are provided for in this article shall be members until their credentials shall have been examined and acted upon as provided for by the by-laws."

In the discharge of the above required duties I hereby ask all competent and designated bodies and authorities to name and issue credentials to the fixed number of delegates to the tenth decennial convention to meet in Washington, D. C., on the second Tuesday of May, 1920, at 10 o'clock a. m., at a hall to be designated hereafter. The appointed delegates are requested to promptly forward their credentials to Noble P. Barnes, M. D., the Arlington Hotel, Washington, D. C., assistant secretary of the convention, who will file them for consideration of the committee on credentials which will be appointed by the president not later than March 1, 1920, according to the requirements of Chapter VII, Article I of the by-laws.

Done at Washington, D. C., May 5, 1919.

HARVEY W. WILEY,
President of United States Pharmacopœial Convention.

CONSTRUCTIONS OF HARRISON ACT

The Circuit Court of Appeals for the Seventh Circuit holds that the provision of section 2 of the Harrison Narcotic Act, after providing that specified narcotic drugs shall be sold on written order forms obtained from the Internal Revenue Department, that "it shall be unlawful for any person to obtain by means of said order forms any of the aforesaid drugs for any purpose other than the use, sale or distribution thereof by him in the conduct of a lawful business in said drugs or in the legitimate practice of his profession" is unconstitutional, as not within the taxing power of Congress, which includes no right to make any specific use of a tax-paid article unlawful (the rest of the section being hold constitutional). It is also held that Rev. Sec. §3236, providing that, whenever more than one pursuit or occupation subject to internal revenue tax are carried on in the same place by the same person, the tax shall be paid for each, requires a separate registration under the Harrison Act by a physician who dispenses and is also a dealer in narcotic drugs, and payment of a separate tax for each; and this is also required by the Internal Revenue regulations.—Blunt v. United States, 255 Fed. 332.

TRI-STATE DISTRICT MEDICAL ASSOCIATION

PROGRAM OF THE ANNUAL ASSEMBLY OF THE TRI-STATE DISTRICT MEDICAL ASSOCIATION TO BE HELD AT ROCKFORD, INCLUDING CAMP GRANT, ILLINOIS,

September 1, 2, 3 and 4, 1919

Headquarters of Meeting: New Woman's Club Building and Theater, Corner of North Church Street and Park Avenue.

The Tri-State District Medical Society (Iowa, Illinois and Wisconsin) extends to the physicians of the Middle West a hearty invitation to be present and participate in the program at the annual assembly of this association held at Rockford, including Camp Grant, Illinois, September 1, 2, 3 and 4.

The territory covered by this organization includes the entire states of Iowa, Wisconsin and Illinois. The word "district" is retained in the name of this society in order to distinguish it from other Tri-State Medical organizations.

This association is purely a scientific body. It assumes no political or legislative duties. The entire time of the annual assemblies outside of social functions, is devoted to orations, addresses, essays, diagnostic clinics and discussions of medical subjects.

The society is chartered under the laws of the State of Illinois and adheres to the code of ethics established by the American Medical Association. *A physician in order to become a member of this association must be in good standing in the County and State societies in the territory in which he or she resides.* It is the sincere wish of this organization that its members also become Fellows of the American Medical Association.

The Tri-State District Medical Association is very fortunate this year in having as its guests some of the most notable men of the profession in this country.

The list of essayists from each of the three states is representative of the very best of the medical profession. Many of these men are physicians of National reputation. Our hope is that the organization may ever have the time on the program taken up with such excellent talent. The diagnostic clinics are always a leading feature at the annual meeting of this society. The clinics are conducted by the eminent men of the profession who have honored the society by their presence as guests. The Rockford physicians are arranging through the committee for an abundance of

material for diagnostic purposes. Physicians from other cities and towns who have interesting or obscure cases are urged to bring them to the clinics. Information may be obtained in regard to the subject by writing Dr. Sanford R. Catlin, Chairman of the Surgical Section, or Dr. Dudley W. Day, Chairman of the Medical Section of the Rockford Committees.

A special invitation is extended to the Doctors' wives, daughters and lady friends to be present. Delightful entertainment will be provided for them by the Ladies' Entertainment Committee of Rockford. The success of the meeting is enhanced largely by the presence of the ladies, so bring them with you, Doctor, and come prepared to stay the whole time of the assembly and particularly to attend the banquet at the close of the meeting. Informal. (This includes the ladies).

(Signed)
William B. Peck, Managing-Director.
Domer G. Smith, Secretary.

Program Committee:
Henry G. Langworthy, Dubuque, Iowa,
Arthur G. Sullivan, Madison, Wisconsin,
Edwin P. Sloan, Bloomington, Illinois.

First Day—September 1, 1919

10:00 to 12:00 a. m.—Registration for Doctors and ladies in Foyer of Theater of Woman's Club Building, Corner North Church Church and Park Avenue.

2:00 p. m.—Automobile Excursion for Doctors and ladies to places of interest including Camp Grant.

2:00 p. m.—Golf Tournament, Rockford Country Club. Doctors please bring their handicap.

7:30 p. m.—Address in Roentgenology. Dr. James Thomas Case, Professor of Roentgenology, Northwestern University Medical School; Battle Creek, Michigan.

8:30 p. m.—Public Lecture to the Physicians and Citizens of Rockford. Subject: The National Welfare. Dr. Victor Clarence Vaughan, President of Michigan State Board of Health, Dean and Professor of Hygiene and Physiological Chemistry, Ann Arbor, Michigan.

Second Day—September 2, 1919

7:00 a. m.—Diagnostic Clinic (Surgical). Dr. Joseph Bloodgood, Professor of Clinical Surgery, Johns Hopkins University, Baltimore, Maryland. Diagnostic Clinic (Medical). Dr. Victor C. Vaughan, Dean of University of Michigan Medical School, Ann Arbor, Michigan. Dr. Christopher Graham, Mayo Clinic, Professor of Medicine, University of Minnesota Graduate School of Medicine, Rochester, Minnesota.

9:30 a. m.—Address of Welcome. Hon. Robert Rew, Mayor of Rockford. Response to Address of Welcome. Dr. Edward Fiegenbaum, Edwardsville, Illinois.

10:00 a. m.—Subject announced later. Dr. Paul Gardener, New Hampton, Iowa.

10:20 a. m.—Empyema as Found in the Army. Dr. Emil Windmueller, Woodstock, Illinois. Discussion led by Dr. Sanford R. Catlin, Rockford, Illinois.

10:40 a. m.—Early Recognition and Treatment of Intussuception. Dr. Charles Krouse, Cedar Rapids, Iowa. Discussion led by Dr. Geo. V. I. Brown, Milwaukee, Wisconsin.

11:00 a. m.—Address. Dr. Victor C. Vaughan, Dean and Professor of Hygiene and Physiological Chemistry, Ann Arbor, Michigan. Address (subject announced later) Dr. James H. McKee, Philadelphia, Pa.

AFTERNOON SESSION

1:30 p. m.—Neuresthenia. Dr. August Sauthoff, Member Medical Staff Wisconsin State Institution, Mendota, Wisconsin. Discussion led by Dr. Frank I. Drake, Superintendent Wisconsin State Institution, Mendota, Wisconsin.

1:50 p. m.—Some Remarks on Mental Status. Dr. Sidney D. Wilgus, Rockford, Illinois. Discussion led by Dr. Arthur W. Rogers, Oconomowoc, Wisconsin.

2:10 p. m.—Goiter. Dr. Thomas F. Duhigg, Des Moines, Iowa. Discussion led by Dr. Edwin P. Sloan, Bloomington, Illinois.

2:30 p. m.—Address. Dr. Joseph Bloodgood, Professor of Surgery, Johns Hopkins University, Baltimore, Maryland.

Camp Grant Program (At Woman's Club Bldg.)

3:30 p. m.—Address. Colonel Peter C. Field, Camp Surgeon, Camp Grant, Illinois.

4:00 p. m.—Tuberculosis and the Soldier. Major Clarence L. Wheaton, Chicago, Illinois. Discussion led by Dr. Robert S. Berghoff, Chicago, Illinois.

4:20 p. m. Treatment of Pneumonia with a Specific Serum (Kyes) at Camp Grant. Major Alfred W. Gray, Milwaukee, Wisconsin. Discussion led by Dr. John H. McClellan, Chicago, Illinois.

1:35 p. m.—The Dietetics of the Severer Digestive Disorders of Infancy. Dr. James W. Van Derslice, President Illinois State Medical Society, Oak Park, Illinois. Discussion led by Dr. Jacob Carl Krafft, Chicago, Illinois.

1:55 p. m.—Catharsis Following Abdominal Operations. Dr. John F. Herrick, Ottumwa, Iowa. Discussion led by Dr. William L. Karcher, Freeport, Illinois.

2:15 p. m.—Suggestions for the Treatment of Fractures of the Radius and Ulna at the Middle Third. Dr. Charles H. Lemon, Milwaukee, Wisconsin. Discussion led by Dr. James P. Dean, Madison, Wisconsin.

2:35 p. m.—Address. Dr. Edward Carl Rosenow, Mayo Clinic, Professor of Bacteriology, University of Minnesota Graduate School of Medicine, Rochester, Minnesota.

3:35 p. m.—Lesions of the Cervical Sympathetic with Report of Three Cases. Dr. Tom B. Throckmorton, Secretary Iowa State Medical Society, Des Moines, Iowa. Discussion led by Charles R. Bardeen, Dean and Professor of Anatomy, University of Wisconsin, Medical School, Madison, Wisconsin.

3:55 p. m.—Reciprocal Relation of Wisconsin with her Neighbors. Dr. John Morris Dodd, Ashland, Wisconsin. Discussion led by Dr. E. B. Coolley, Danville, Illinois.

4:15 p. m.—Address. Dr. Hugh Cabot, Professor of

Surgery, Medical School of Harvard University, Boston, Massachusetts.

EVENING SESSION

7:00 p. m.—Address. Dr. Fred H. Albee, Professor of Orthopedic Surgery, New York Post-Graduate School of Medicine, New York City.

8:00 p. m.—Empyema. Dr. Joseph Dean, Madison, Wisconsin. Discussion led by Dr. Robert S. Van Valzah, Associate Professor of Clinical Medicine, University of Wisconsin Medical School, Madison, Wisconsin.

8:20 p. m.—Fixation of the Cecum (Lantern Slide Demonstration). Dr. Clifford U. Collins, Peoria, Illinois. Discussion led by Dr. Roland Hazen, Paris, Illinois.

8:40 p. m.—The Surgical Importance of Non-Rotation of the Colon During Its Development. (Lantern Slide Demonstration). Dr. Frank Buckmaster, Effingham, Illinois. Discussion led by Dr. Wilson Cunningham, Platteville, Wisconsin.

9:00 p. m.—Address. Dr. Dean DeWitt Lewis, Associate Professor of Surgery, Rush Medical College, Chicago, Illinois.

Smoker:

4:40 p. m.—Chronic Gas Poisoning, Based on Observation of Two Thousand Cases. Captain Robert S. Berghoff, Chicago, Illinois. Discussion led by Dr. John F. Herrick, Ottumwa, Iowa.

5:00 p. m.—Luncheon at Country Club for Doctors and their ladies.

EVENING SESSION

7:00 p. m.—Motion Pictures.

7:30 p. m.—Address. Dr. Christopher Graham, Mayo Clinic, Professor of Medicine, University of Minnesota, Graduate School of Medicine, Rochester, Minnesota.

8:30 p. m.—The Diagnosis and Treatment of Gastric and Duodenal Ulcers. Dr. Eber F. Stevenson, Waterloo, Iowa. Discussion led by Dr. Joseph W. Rowntree, Waterloo, Iowa.

9:00 p. m.—Address. Dr. Frederick Atwood Besley, Professor of Surgery, Northwestern University Medical School, Chicago, Illinois.

Third Day—September 3, 1919

7:00 a. m.—Diagnostic Clinic (Surgical). Dr. Hugh Cabot, Professor of Surgery, Medical School of Harvard University, Boston, Massachusetts. Diagnostic Clinic (Medical). Dr. Solomon Solis Cohen, Professor of Medicine, Jefferson Medical College, Philadelphia, Pa.

9:30 a. m.—Blood Pressure Conditions as Studied by a General Practitioner. Dr. Frank T. Hartman, Waterloo, Iowa. Discussion led by Dr. Walter H. Sheldon, Madison, Wisconsin.

9:50 a. m.—Compulsory Health Insurance. Dr. Elmer B. Coolley, Danville, Illinois. Discussion led by Dr. John R. Ballinger, Chicago, Illinois.

10:10 a. m.—Business Evolution and the Future of Private Medical Practice. Dr. William E. Fairfield, Green Bay, Wisconsin. Discussion led by Dr. Theodore J. Redelings, Marinette, Wisconsin.

10:30 a. m.—The Opathalmogolist and Otologist Retrospectively and Prospectively Considered. Dr. J. Sheldon Clark, Freeport, Illinois. Discussion led by Dr. Joseph C. Beck, Associate Professor of Surgery (Ear, nose and throat) University of Illinois, College of Medicine, Chicago, Illinois.

10:50 a. m.—Address. Dr. Solomon Solis Cohen, Professor of Medicine, Jefferson Medical College, Philadelphia, Pa.

AFTERNOON SESSION

1:15 p. m.—Intestinal Obstruction with Unusual Complications. Dr. John R. Guthrie, Dubuque, Iowa. Discussion led by Dr. Thomas W. Nuzum, Janesville, Wisconsin.

Fourth Day—September 4, 1919

7:00 a. m.—Diagnostic Clinic (Surgical). Dr. George Washington Crile, Professor of Surgery, Western Reserve University, School of Medicine, Cleveland, Ohio. Dr. Albert John Ochsner, Professor of Surgery, University of Illinois, College of Medicine, Chicago, Illinois. Diagnostic Clinic (Medical). Dr. William Sidney Thayer, Professor of Medicine, Johns Hopkins University, Medical Department, Baltimore, Maryland.

9:45 a. m.—Shock in Theatre of Operation and Advancement Zone in War, a Few Observations. Dr. Donald McCrae, Jr., Council Bluffs, Iowa. Discussion led by Dr. Dean DeWitt Lewis, Chicago, Illinois.

10:00 a. m.—Application to Civil Practice of Principles Disclosed in the Treatment of Thoracic War Injuries. Dr. John L. Yates, Professor of Clinical Surgery, Marquette University, Milwaukee, Wisconsin. Discussion led by Dr. Louis M. Warfield, Professor of Clinical Medicine, Marquette University, School of Medicine, Milwaukee, Wisconsin.

10:25 a. m.—The Doctor and Public Health. Dr. C. St. Clair Drake, Director, Illinois Department of Public Health, Springfield, Illinois. Discussion led by Dr. Victor C. Vaughan, Professor of Hygiene and Physiological Chemistry, University of Michigan, Medical School, Ann Arbor, Michigan.

10:45 a. m.—Address. Dr. Albert John Ochsner, Professor of Surgery, University of Illinois, College of Medicine, Chicago, Illinois.

AFTERNOON SESSION

1:00 p. m.—Some Points on Prostatectomy, with Special Reference to Its after Treatment. Dr. Dennis J. Hayes, Professor of Genito Urinary Surgery, Marquette University, School of Medicine, President Wisconsin State Medical Society, Milwaukee, Wisconsin. Discussion led by Dr. Emerson A. Fletcher, Milwaukee, Wisconsin.

1:20 p. m.—Address. Surgeon General Merritte W. Ireland, U. S. Army, Washington, D. C.

2:30 p. m.—Address. Dr. William Sidney Thayer, Professor of Medicine, Johns Hopkins University, Medical Department, Baltimore, Maryland.

3:40 p. m.—Address. Dr. George Washington Crile, Professor of Surgery, Western Reserve University, School of Medicine, Cleveland, Ohio.

Some time during the four days Dr. Henry G. Langworthy, Dubuque, Iowa, will present a paper on the subject "Our Society Endowment Fund."

BANQUET 6:30 P. M.

ADDRESSES

Major General Leonard Wood, United States Army.

Eminent men of the profession who are guests of the Association and other distinguished citizens of the United States.

Presidents of States Societies.

Wisconsin—Dr. Dennis J. Hayes, Milwaukee.

Iowa—Dr. William L. Allen, Davenport.

Illinois—Dr. James W. Van Derslice, Oak Park.

(Signed)

William B. Peck, *Managing Director.*

Domer G. Smith, *Secretary.*

Program Committee

Henry G. Langworthy, Dubuque, Iowa.

Edwin P. Sloan, Bloomington, Ill.

Arthur G. Sullivan, Madison, Wis.

Public Health

NEW HEALTH LEGISLATION

While a large number of measures having to do with health and public welfare failed in passage in the 51st General Assembly, a considerable number of such bills were passed and have been approved by Governor Lowden.

The principal measures of this character are the following:

Senate Bill No. 225: To establish a State Sanitarium for Women and provides that all women above the age of 18 whose offenses are punishable by confinement in the county jail, shall be committed to such sanitarium. The institution will be operated by the Department of Public Welfare.

Senate Bill No. 253: Authorizes counties to segregate and treat persons suffering from communicable venereal diseases.

Senate Bill No. 418: Amends the 1908 law relative to municipal tuberculosis sanitaria reducing the tax from one mill to three-quarters of a mill.

Senate Bill No. 449: Authorizes the Department of Public Welfare to engage in the rehabilitation of physically handicapped persons and to establish a school of rehabilitation.

Senate Bill No. 546: Reduces the limit of tax for municipal tuberculosis sanitaria in cities of less than 100,000 population from two mills to one and one-third mills.

Senate Bill No. 553: Amends the law of 1917 for the organization of public health districts by reducing the limit of tax for such purposes from three mills to two mills.

Senate Bill No. 563: Authorizes cities of less than 100,000 population to establish public comfort stations and to levy a tax of not to exceed one and one-third mills after referendum for this purpose.

House Joint Resolution No. 14: Designates the week beginning on the second Sunday in May in 1919 and 1920 as Health Promotion Week and directs its observance.

House Bill No. 4: Similar to Senate Bill No. 563, authorizing establishment of public comfort stations.

House Bill No. 42: Authorizes city councils by a two-thirds vote to borrow money to meet the expense of accidents, casualties and epidemics.

House Bill No. 271: Amends the law relating to coroners. Provides that coroners may call a physician to examine the body of a deceased person when the cause of death is supposed to be violence or of criminal character, and to cause autopsies to be made when necessary. Requires the coroner to conduct post-mortem examinations when death is presumed to be due to crime, but provides that autopsies shall not be held except as provided by law.

House Bill No. 328: Amends the Act establishing a surgical institute for children and provides that children under the age of sixteen may be admitted. The institution is under the control of the Department of Public Welfare.

House Bill No. 484: To validate the educational qualifications of applicants for licenses or registration in Illinois, when such applicants have attended a school in good standing during first three years, but not in good standing during the fourth year.

HEALTH SURVEY IN EAST ST. LOUIS

In conjunction with the War Civics Committee, appointed by the War Department, the State Department of Public Health, through its Division of Surveys and Rural Hygiene, is conducting a thorough health survey in the city of East St. Louis. The field work is being carried on by Paul L. Skoog, Chief of the Division of Surveys and Rural Hygiene, with the cooperation of the Division of Child Hygiene and Public Health Nursing, Tuberculosis, Sanitation, Vital Statistics, Communicable Diseases, and other divisions of the State Health Department. A special survey of Tuberculosis will be carried out by the Division of Tuberculosis in conjunction with the National Tuberculosis Association which has made a special financial grant for this purpose.

East St. Louis is an industrial city presenting many complex problems due to peculiar sanitary conditions, the large numbers of negroes and persons of foreign birth, and to the absentee landlord. The city has grown more rapidly than any city in Illinois, having increased in population from 58,000 to 92,000 during the past eight years.

On account of the complex conditions existing, the War Civics Committee was created and was financed through a fund of $200,000.00 raised by the residents of the community.

As a result of the health survey, it is expected that the local health department will be completely reorganized on a departmental basis, and that many important municipal health activities will be established.

The East St. Louis survey is the sixth important survey to be carried out by the State Department of Health during the past two years. On the completion of the East St. Louis survey a similar survey will be made in the city of Alton.

POSSIBLE RECURRENCE OF INFLUENZA

In view of the recognized possibility that influenza will recur in epidemic form during the coming autumn and winter, extensive plans are being made by the State Department of Public Health and by the American Red Cross to adequately meet all of the needs of such an emergency. The American Red Cross will be prepared to furnish nurses to be sent into communities which may be afflicted and will also have on hand supplies which may be necessary for the establishment and equipment of emergency hospitals.

The State Department of Public Health is arranging for the mobilization of medical emergency forces and contemplates the employment of local physicians for this purpose under the State and county collaborating health service.

NEW CIRCULAR ON THE CARE OF BABIES

A new thirty-two page circular on the care of babies is being issued by the State Department of public health for free distribution. While somewhat similar to the circular issued in 1917, this pamphlet has been entirely rewritten and contains a large amount of entirely new material. It is expected that the pamphlet will have very wide circulation in connection with the Child Welfare activities which are being promoted in many sections of the State.

PUBLIC HEALTH ACTIVITIES AT THE ILLINOIS STATE FAIR

The health exhibits of the State Department of Public Health at the Illinois State Fair to be held in Springfield during August, will be much more extensive than ever before. The Baby Health Conference which has been a feature of the Fair for a number of years past, is being developed on a larger and broader scale than ever before. Among the special features of the general exhibit this year will be a model nursery, demonstrations of all phases of health work, special venereal disease exhibits for men and women, generous employment of motion pictures and automatic stereopticons and several mechanical devices.

The Director of the Department of Public Health has been made Superintendent of public health for the State Fair, and all of the Division Chiefs will be present throughout the Fair for the purpose of consultation with visiting health officers and physicians.

A cordial invitation is extended to health officers and doctors to make the offices of the State Department of Health at the Fair grounds their headquarters.

MORTALITY DATA FOR 1918

For the first time in the history of Illinois, accurate mortality figures are now available for public and official information. These improved records are made possible through a more satisfactory vital statistics law and through the higher degree of efficiency made possible under the Civil Administrative Code. From the statistics for 1917 and 1918 that have just been completed, it is found that during 1918 there were 103,138 deaths in the State and that 44,605 of these deaths occurred in the city of Chicago. The death rate for the State as a whole was 16.3 per thousand of population. The deaths during 1918 exceeded those of 1917 by over 18,000, this increase being attributed to a large extent, to the influenza pneumonia epidemic of last autumn which was responsible for 32,334 deaths. There were 17,879 deaths ascribed to influenza and 14,445 due to complicated pneumonia.

It was found that there were 341 deaths in 1918 due to measles, twenty-five times as many as died from smallpox and more than twice as many as died from scarlet fever.

There were 533 deaths from typhoid fever, only 38 of which occurred in the city of Chicago with 495 in the rest of the state. The typhoid death rate outside of Chicago was ten times as high as the Chicago rate. Through adequate consideration of sanitation measures, Chicago has now attained the lowest typhoid death rate of any large city in the civilized world.

Deaths reported from other communicable diseases are as follows: tuberculosis 7,619, smallpox 14, scarlet fever 154, infantile paralysis 144, epidemic meningitis 164, malaria 17, and diphtheria 1,152.

The diphtheria mortality is regarded by the State Department of Public Health as inexcusably high inasmuch as diphtheria antitoxin is supplied free to all persons in the state and is made available through five hundred distributing stations.

COUNTY COLLABORATING HEALTH OFFICERS

The State Department of Public Health is again urging all county medical societies to make nominations of representatives on the state and county collaborating health service with at least one county collaborating health officer in each county. This service has been pretty well organized in many sections of the state, but there are still some counties in which the country medical societies have not acted.

County collaborating health officers will report to the State Department of Public Health and in the absence of full-time medical health officers or in the face of emergency will be called upon to act for the state, compensation being made on a reasonable per diem basis. It is the plan of the Department to have conferences from time to time at which all the collaborating county health officers will be present and where the more recent advances in preventive medicine will be taught and demonstrated by specialists and authorities on these particular subjects. One of the duties of the county collaborating health officer will be to pre-

sent to his county medical society the results of these conferences.

MOTION PICTURE FILM SERVICE

The State Department of Public Health is now prepared to furnish motion picture films and motion picture machine and operator for the uses of county medical societies. When public meetings are arranged under the auspices of county societies, the Department will assist in every way possible. On account of the large number of requests for this motion picture service, county societies are asked to communicate with the State Department of Public Health as far in advance of their meeting as may be possible so the reservations of machines and operators can be made.

COMMUNICABLE DISEASES FOR JULY

During July there has been noted a decided increase in the number of cases of poliomyelitis. The larger number of these cases being reported from Chicago and the Northern part of the state. During the month, five cases of poliomyelitis were reported from Standard, Putnam County, with two deaths. It is an interesting coincidence that the first case of poliomyelitis in the epidemic beginning three years ago was reported from the same town and by the same physician.

A rather serious epidemic of scarlet fever developed in Morris, Grundy County, with seventeen cases reported within one week.

Typhoid fever was more prevalent during July in several sections of the state than at any time for a number of years past. A number of cases were reported from Mount Carmel, Allendale, and Bellmont in Wabash County, and at Stonefort, Saline County.

The State Department of Public Health is urging the more general use of typhoid-para typhoid vaccines as means of immunizing against the disease.

Correspondence

WHY NOT A DOCTOR'S UNION?

Chicago, Ill., July 20, 1919.

To the Editor: Free consultations, advice and prescriptions in the columns of the daily press. Free Wassermanns, free salvarsans, free medical treatment of all kinds for the affluent. Pitiful salaries for public medical officers; free medical services to the government, and as yet no free food, free raiment or free rent for the doctor. The doctor pays the same taxes as the next fellow (note the "excess profits tax" of last year) and his funeral is just as expensive as is a layman's. Similar conditions in labor circles would cause a few bloody riots. "Scab" labor is not popular.

But labor soon cures such ills. Why? Because labor is organized and its votes command respect.

It is true that small groups of doctors occasionally do organize and get behind one or another candidate in election. If these men were asked why, the majority of them could not give an intelligent answer. The interested few would not answer, or at least truthfully. Did any one ever hear of the profession organizing itself politically and getting behind a big principle in the interest of the profession as a whole? Individual doctors get behind candidates for public office, it is true, but rarely on principle. Most of these medical men bob up in politically filled offices later on.

A certain medical gentleman in high political office once said, "The doctors can go to hell." This gentleman knew the spirit of the public and he also knew the medical profession.

If the doctors of this country ever intend to strike for their rights, now is the time. The profession has just demonstrated that, in the last analysis, it is the most useful of all professions. Governments are so crude and reversionary that they cannot sustain themselves without war, and —no doctors, no army. The government now might listen to us if we hurried.

All of which is purely gratuitous and supererogatory.

Why seek for an *esprit du corps* in the doctor, who, being the only known organism that has not the instinct of self-preservation, consequently is the humblest creature of which biology takes cognizance.

Not only does the doctor lack the instinct of self-preservation, but he evinces great activity in legislating against himself. N. B. If a practitioner of repute in his own state wishes to practice in another, in which there is no reciprocity, he is confronted with an examination—often at the hands of men who could not even formulate their own questions, much less answer them, without the aid of a medical library. All the same, the United States government drew no lines of discrimination against any state or method of licensing when physicians were needed for the army.

The present trend toward social upheaval suggests that the doctors would better "get in out of the wet." A doctor's union might enable us to pass as "wage earners." This would be a big

concession on the part of the public, which is slow to admit that a doctor ever earns anything, even gratitude. What is still more pertinent, it might prevent the doctor from being classified as bourgeoise. Events might so shape themselves that such classification would be dangerous to the profession.

But "What's the use?"

G. Frank Lydston.

PRACTICING MEDICINE UNDER A COMMISSION, LIKE PUGILISM, RACE TRACK GAMBLING, VICE CONTROL, ETC.

Narcotic Problem and the Law

117 West Seventy-sixth Street,
New York, July 12, 1919.

To the Editors:

Many physicians are refusing to prescribe narcotics owing to the danger and disrepute now attached by law to the legitimate use of these agents. They are doing this even at the risk of the suffering entailed upon their patients in order to compel attention to the necessity for the repeal of a law which places the practice of medicine in this State under a commission like pugilism, race track gambling, vice, and the public utilities.

The following comment appeared in the *New York Tribune* on July 6, 1919:

"It was also announced by State Commissioner Herrick that summonses for nearly eight thousand delinquent physicians, druggists, and veternarians authorized to dispense narcotic drugs and who failed to register with the State Department of Narcotic Drug Control on or before July 1st will be obtained from magistrates throughout New York State beginning next Thursday. . . . Of the 17,000 physicians, dentists and veterinarians who are required to register, only 8,000 have complied with the law," said Commissioner Herrick. "I attribute the failing of the doctors to re-register to the fact that many are out of town. Some undoubtedly have been careless, but some probably are antagonistic to the law and these must be compelled to conform to the law."

It is said that "ignorance of the law excuses no one but the lawyer."

Commissioner Herrick, a lawyer as well as narcotic drug commissioner, is in error when he states that "doctors are required to register under this law." They are required to do so only in order to prescribe what the law calls habit forming drugs.

John P. Davin, M. D.

Last year we called them war gardens. This year they are peace gardens; and with just as much need for them as there was for the war gardens of 1918.

Playgrounds are always supplied with plenty of fresh outdoor air and sunshine. This is why they are fine for children, who should be encouraged to play out of doors whenever they can.

Society Proceedings

THE CHICAGO LARYNGOLOGICAL AND OTOLOGICAL SOCIETY

The regular monthly meeting of the Chicago Laryngological and Otological Society was held on Tuesday, December 17, 1918, at the Hotel La Salle at 8:15 p. m.

The Vice-President, Dr. Charles H. Long, in the chair.

Dr. Harry Kahn presented a new otoscope.

Dr. L. W. Dean, Iowa City, Iowa, exhibited a specimen of a brain which showed an abscess of the cerebellum and a tumor at the cerebello-pontine angle. He was interested particularly in the case because it had been possible to positively demonstrate before death the definite symptoms of acute suppuration of the labyrinth and of the cerebellar lesion in the same patient. Operative procedure and post-mortem examination confirmed the diagnosis which was made of the intracranial cerebellar lesion and the abscess as well. The patient had an acute labyrinthitis and a tuberculamo of the angle, with an abscess of the cerebellum.

The diagnosis was based on the presence of nystagmus of two types, the cerebellar and the labyrinthine. There was also a falling in the direction of the lesion irrespective of the position of the head.

Dr. L. W. Dean also presented a paper entitled, "The Proper Procedure for External Drainage of Retropharyngeal Abscess Secondary to Caries of the Vertebrae."

The author stated that since this procedure was demonstrated to him a number of years ago by Professor Prentiss, he had proved to his complete satisfaction both the simplicity and practicability of the operation. In his opinion, not only should every case of retropharyngeal abscess which was secondary to caries of the vertebrae be drained externally, but every case of retropharyngeal abscess should be drained in that way. There was no reason why the operation should cause shock of any importance, even with a child that was suffering from extreme toxemia. By this method the pus discharged externally and not into the respiratory and alimentary tract, where it was liable to do much damage. The external operation was also indicated because of the fact that the infection of the retropharyngeal space extended in to vertical direction, between the fascial planes. It might reach from the basilar process of the skull to the upper part of the thorax. When the external operation was performed, the finger was introduced into the retropharyngeal space and the extent of the abscess cavity could easily be determined. Drainage tubes could be inserted as high up as the base of the skull, or as low as the clavicle if such a procedure was indicated, and the drainage secured in this way was far superior to that obtained from the stab operation on the posterior wall of the pharynx.

The operation did not necessitate the incision of any muscle except the platysma. The incision should extend through skin, platysma and vaginal fascia. No

careful dissection was necessary; it was simplicity itself and could be performed almost altogether with the index finger.

The operation was described in detail and the paper was accompanied by drawings which illustrated clearly the anatomical conditions met with.

DISCUSSION

Dr. Alfred Lewy asked if after they were through the fascia all the rest of the operation was done with the finger.

Dr. Dean replied that he went in with the finger and found the abscess, which was just like a full bag in front of the finger, and then inserted any blunt instrument which would not do a damage and lacerated the sac.

Dr. Harry Kahn was not sure whether he had understood Dr. Dean to say that all retropharyngeal abscesses should be drained externally. In some experience with such abscesses he had used an opening through the mouth, but with blunt artery forceps, as recommended by Abt. His practice has been to make the opening, using the finger first as a guide, and then pressing the forceps into the mass, opening them and allowing the pus to flow out. The child was held with the body raised and the head down. No difficulty had ever arisen from the aspiration of pus. The child was put to bed with the head down and kept in that position until the abscess completely drained. Good results had been obtained by this method, and he did not remember any ill results. The patients recovered in a few days and the glands disappeared. Occasionally a case had required a second stab, and once in a great while a third, but they had had no fatality.

Dr. Robert Sonnenschein understood that the paper referred to cases where there had been caries of the vertebrae and not to ordinary abscesses.

It was important to remember that in retropharyngeal abscesses the pus might be differently located, depending on the origin of the infection.

In the usual cases the abscess arose from infected lymph glands lying in the region of the pharynx. In such instances the pus formed between the prevertebral muscle and the pharyngeal mucosa and tended to point toward the pharynx. The treatment there,of course, was opening the abscess by the usual incision in the throat. But where a caries of a vertebral body was the cause of the pus, and the pus was behind the prevertebral muscles and might burrow towards the mediastinum, the operation so well described and perfected by Dr. Dean ought, it seemed, to be decidedly indicated.

Dr. Dean stated that the title of the paper conveyed that impression, but that in the course of it he had stated that as the procedure was so simple, in his judgment it was the best, and he was opening all retropharyngeal abscesses by the external route. He did not wish to make this a dogmatic statement because so many men with much experience were doing the internal operation.

Dr. A. A. Hayden thought the presentation of the subject of retropharyngeal abscess that Dr. Dean had given the Society was indeed interesting. The advantage of this method in the treatment of abscesses low down, especially when they were large and accompanied by bone necrosis, was obvious.

Where the abscess was located higher up, however, the old method of incision through the mouth was a satisfactory and safe surgical procedure, if done under proper precautions. Most important among these were the use of an efficient suction machine and the immediate lowering of the head (if a child, holding up by the heels), so that none of the pus could be aspirated into the lungs to invite a septic aspiration pneumonia.

Dr. J. Gordon Wilson said the Society was indebted to Dr. Dean for the history and post-mortem findings of this interesting case. It presented a distinct lesion of the peripheral end organ of the right VIIIth nerve and a tumor of the right cerebello-pontine angle with changes in the cerebellum. There was a combination of cerebellar nystagmus and labyrinthine nystagmus. It was now generally accepted by physiologists and neurologists that the cerebellar and labyrinthine types differed, as Dr. Pike and Dr. Wilson demonstrated some years ago. In the labyrinthine nystagmus one saw the slow quick type and in the cerebellar the ataxic type. The difficulty was that in so many of the clinical cases of tumor there was a combination of the two. This case showed how a careful observer could arrive at a clear view of what was present. Dr. Wilson had for many years used glasses of 18 diopters to cut out fixation and more easily differentiate the two types. Dr. Dean was puzzled as to why the patient lay on the right side, but it might be assumed that he was most comfortable on that side—that there the vertigo was at its minimum. Dr. Wilson recalled to Dr. Dean's attention his experimental findings were (a) the left half of the cerebellum was removed and (b) the left labyrinth was removed. As a rule, in the former the animal preferred to lie on the right side and in the latter on the left. This case furnished interesting information which, as Dr. Dean showed, must be interpreted in the light of physiological knowledge.

Dr. Wilson never had been called on to operate on a case of caries of the vertebrae. However, within the last two years, as an otologist, he had been able to diagnose two cases of early vertebral caries on account of pain in the ear. It should not be astonishing to find that pain in the ear might be an early symptom of caries, since fibers of the second cervical nerve are distributed to the region of the ear.

Dr. Otto J. Stein was reminded by Dr. Wilson's remark concerning pain in the cases of beginning vertebral caries of a case he had of retropharyngeal abscess due to middle ear involvement, which was a well known condition, but he did not believe it had been touched upon. It was possible for such an abscess to form behind the vertebrae, where it could dissect its way down, following the canal and going in behind the fascia. That type of abscess should be borne in mind in these cases. He complimented Dr. Dean upon his method of procedure and thought it was one of the greatest advances in the treatment of retropharynbeal abscesses. He considered the points brought up by Dr. Wilson exceedingly interesting.

Dr. Robert Sonnenschein asked whether Dr. Dean curetted the bodies of the vertebrae.

Dr. Charles H. Long inquired as to whether any effort had been made to determine the cause of the caries and how long it took for it to clear up.

Dr. Dean, closing, said his only excuse for giving this paper at this time was because a recent article in an English Journal had seemed to him so erroneous. He had had it in mind for three or four years and after reading this article had decided to present it at this time. All of their cases had been secondary to bone tuberculosis and came from the orthopedic department, where they had been treated for that disease. They had not curetted the bodies of the vertebrae in any case, but simply inserted the drainage tube. Most of the cases had disappeared from their service or had died with the usual symptoms. The fact that these did not clear up, but kept constantly discharging illustrated to him the necessity of doing an external operation for tuberculous processes. He had seen cases of tuberculous caries that had been opened into, that for months and months continued to discharge tuberculous material into the pharynx, which was very bad for the patient. A suggestion was made that they go to the bottom of the abscess. When they go in they find that they can go to the top and bottom with the finger, and sometimes drainage tubes were placed both up and down. Very frequently the abscesses extended much further than was suspected preceding operation.

Dr. Austin A. Hayden read a paper entitled "The Ear, Nose and Throat Examinations of Aviators, With Special Reference to the Technic of vestibular Reaction."

The report was made for a two-fold purpose:

(1) To give those who expected to do the work some of the more importan technical details that had been elaborated and which had enabled them to carefully examine as many as sixty applicants in a single day.

(2) To further stimulate interest in the functional tests of the semi-circular canals. This field, though

old, had never been widely explored until the war created a national demand for the work Jones had systematized and put to practical use.

The applicants had been almost without exception the finest type of red-blooded young American manhood and the percentage of rejections had, consequently, been very small. There was no malingering to escape service, but many had tried to "get by" with disqualifying defects.

The routine eye, ear, nose and throat examination embraced the history of any ear, nose and throat trouble, including head injuries and dizziness from all causes; examination of nose, throat, naso-pharynx, external auditory canal, tympanic membranes, cochlea; test of hearing by whisper and watch; semi-circular canals, equilibration by rotation tests, caloric tests, nystagmus, vertigo, past-pointing, falling. These examinations were most carefully carried out. Tonsillectomies were required of three classes of men: (1) Those who had had recurrent tonsillar infections as often as once a year. (2) Those whose tonsils were obstructive. (3) Those from whose tonsils free pus could be expressed in considerable quantities. On this basis about 5 per cent of the men were operated upon.

For hearing 20/20 was required for the high and low whispered tones and 40/40 was considered normal for the watch, or possibly a smaller fraction if the whisper had showed fill 20/20.

Both spontaneous and induced nystagmus were tested for, the nystagmus referred to being the after-nystagmus of the second degree. No after-after-nystagmus has been seen. Pierce had observed that nystagmus stopped with vomiting. The author, in douching etherized patient's ears, had seen the ocupar deviation disappear when emesis occurred.

In counting and recording past-pointing, the following sources of error were noted: (1) Fast-pointings; (2) cross cutting; (3) preconceived ideas as to just how the pointing should be done; (4) prolonged turning. Strict silence and rigid discipline aided greatly in doing rapid, accurate work.

Of the 3,748 applicants only 142 were rejected for abnormalities of the Kinetic Static Sense; of these 118 failed in past-pointing, 17 in nystagmus and 7 in falling; 22 men were nauseated and 31 more vomited. Of the total number examined 692 were rejected as being unfit to become flyers, while 3,056 were pronounced about 100 per cent physically perfect by the examining unit. The disqualification percentage for all causes was 18.04 per cent.

FULTON COUNTY.

The eighty-seventh meeting of the Fulton County Medical Society was called to order at 2:00 p. m. July 1, by President Oren in the parlor of the Y. M. C. A. in Canton.

Dr. R. E. Adkins of Springfield gave some excellent instructions in examining the chest for early diagnosis of tuberculosis. Several patients had been brought in and a very instructive clinic was held by Dr. Adkins.

It was decided to hold a special picnic meeting at Bernnadotte at a time to be set by the president and secretary later.

On motion the secretary was instructed to invite Dr. Adkins and companion, the officers of the County Red Cross Society, the officers of the County Tuberculosis Association and the County Sanatorium Committee to the Special Meeting at Bernnadotte.

A communication from the National Health Service was read conveying the information that this service was prepared to take care of any disabled soldiers, sailor, marine or military nurse who required hospital care and physicians were requested to notify them of any such patients that came to their notice.

Dr. Davis, of Avon, gave an excellent paper on "The Practice of Medicine in the Country," which was freely discussed.

A unanimous vote of thanks was tendered Drs. Adkins and Davis.

Dr. Adams moved that a County Fee Bill be adopted. Carried.

On motion the President appointed the following to draft a County Fee Bill and report at the Annual Meeting in October, Drs. Adams, Chapin, McCumber, Crouch, and Connelly.

Fifteen members and two visitors were present.

D. S. RAY,
Secretary.

MADISON COUNTY.

Our June Meeting.

The Madison County Medical Society met at Elks' Club, in Granite City, on the afternoon of June 6, 1919, with President Dr. Chas. R. Kiser in the Chair.

Seventeen members and three visitors were present.

The minutes of the last meeting were read and approved. Drs. James E. Watson and Maurice R. Williamson, both of Alton, were elected to membership.

An invitation from Dr. Geo. A. Zeller, to hold a meeting at the State Hospital, was unanimously accepted for the afternoon of June 27, 1919. Senator Bardill's letter on osteopathic legislation was read and ordered filed.

Dr. B. H. King made a report of a visit made by him and Dr. Chas. R. Kiser, to the legislative committee with reference to the chiropractic bill and expressed the conclusion that vicious legislation could only be fought with a legislative fund. The report of our State Delegate, Dr. W. H. C. Smith, who was unavoidably absent, was read by Dr. Mather Pfeiffenberger, of Alton. This report was published in the *Madison County Doctor*. Dr. Berry and Dr. Schroeder made verbal reports of their observations at the meeting of the State Society.

It was announced that Dr. John H. Siegel was a patient in St. Anthony's Hospital and that Dr. J. W. Scott was seriously ill at his home. On motion of Dr. Pfeiffenberger, the secretary was instructed to send to each a message of heartfelt sympathy with our very best wishes for a speedy recovery. It was

also ordered that flowers be sent to accompany these messages.

On motion the society endorsed the resolution passed by the house of Delegates at Peoria, advocating an increase in our fees for professional service and the secretary was instructed to publish said resolution, with our endorsement in all the newspapers of our county and in the *Star-Times*, of Staunton, Ill.

The President then delivered the annual address on "Medical Organization." It was a very able and timely paper and was received with marked interest. On motion the address was ordered sent to the ILLINOIS MEDICAL JOURNAL for publication.

Special Meeting at Alton State Hospital.

Friday, June 27, 1919, was a red-letter day in the history of the Madison County Medical Society. On that day we held a special meeting at the Alton State Hospital on invitation of the Superintendent, Dr. Geo. A. Zeller, and it proved to be one of the best meetings we have ever had.

Our Vice-President, Dr. F. O. Johnson, called the meeting to order and delivered the following address:

"We are very much pleased to have such a large audience respond to the invitation of Dr. Zeller, so kindly extended to our society. We especially welcome the ladies because we feel that the ladies of our household have a right to some of the pleasures that are connected with these half holidays. This meeting is arranged as a social occasion and the usual business meeting will be omitted. We meet here in special recognition of those members who have been in the service of the government, either in this country or abroad, and have returned to civil life. We extend to them a hearty welcome and express our pleasure in having them with us once again, and know that out of their vast store of experience, gained during the war our society proceedings will be benefited. We hope that, in the near future, some of these experiences will be given to the society, by the men who have rendered such efficient service to the government.

Thirty of our members volunteered in the service of the government and rendered efficient service in the hospitals and cantonments in this country, and along the battle lines abroad. Twelve of these men went overseas with the American Army. Twenty-five of our members have returned to civil life. Five of our members have not yet been discharged and as far as we are informed, are still abroad."

The chairman then presented the Rev. Jas. R. Sager, of Edwardsville, who in a few well-chosen words introduced the speaker of the day, the Rev. Arthur F. Ewert, of White Hall, Ill.

Lieut. Ewert was the chaplain of the 77th division of the American Army and was right in the thick of the fight. He spoke on the services that the medical profession rendered during the war. He paid a glowing tribute to the efficiency of the medical corps and eulogized their skill in restoring those wounded in battle. He spoke of the long hours devoted to the service and said that the doctors would often work day and night up to the point of physical exhaustion. His address abounded in humor and pathos and was the result of his own personal observation and experience.

Such wonderful word pictures were never before presented to our members. He carried his audience right up to the front line trenches and made his hearers see the bloody conflict in which the boys were engaged. He took us into the dugouts where first aid was given and where the wounded were placed in ambulances to be taken to the field hospitals.

His hearers were held spellbound by the realistic recitals of the scenes as they followed in rapid succession throughout the presentation. They could feel the soul anguish of the chaplain's bugler, as he sounded "taps" over the dead body of his pal. They were moved to the very depths over the vivid recital of the maiming and wounding of our boys. But the next moment they heartily joined with the speaker in laughter over the letter of a colored soldier who writing to his dusky damsel, said: "When I gets back to you, honey, de whole world will be no man's land to me."

It was a glorious effort and the speaker was complimented by securing the rapt attention of his hearers which he held from start to finish.

Thirty of our members were present and we had the pleasure of greeting thirty-five lady guests, the wives, mothers, sisters, daughters and sweethearts of our members.

ST. CLAIR COUNTY.

The St. Clair County Medical Society met in regular session in the Chamber of Commerce Rooms, Murphy Building, East St. Louis, July 3, 1919, with fourteen members present.

Delegate C. S. Skaggs made a verbal report on the proceedings of the Peoria meeting of the State Society, dwelling with great stress on the meagre attendance from St. Clair County. He considers it a serious reflection on the loyalty of the members to leave the work of the Society to the few who have been bearing the burdens of management for years. He emphasizes the fact that the State Society is more of a "business organization" than a "scientific" body, and referred to the work of preventing the passage of vicious legislation. Only three members of the County Society attended the Peoria meeting.

Dr. Royal Tharp made a very interesting and profitable report on the means adopted by the A. E. F. in the prevention of venereal disease, detailing the methods employed, and giving statistics shown the results. Considerable discussion followed.

Society adjourned.

C. W. LILLIE,
Secretary.

WHITE COUNTY.

The White County Medical Society met at the offices of Dr. J. Niess, Carmi, Illinois, June 26 at 1:30 p. m.

Voted by society that new Fee Bill becomes effective

when signed by majority of members of White County Medical society.

Programs will be arranged for meetings September 25, 1919 and December 18, 1919.

Following program was rendered:

"Report State Medical Meeting, Peoria," Dr. J. Niess, Carmi.

"Tetanus with Report of Cases," Drs. C. W. Puntney and J. A. Boyer, Carmi.

Both of the papers and discussions on tetanus were interesting and valuable inasmuch as they proved beyond the question of doubt that tetanus antitoxin was not only a prophylactic agent but was likewise curative if administered in time and sufficient dosage. Of the seven cases treated and discussed there were five recoveries. In other words the mortality rate was only about 20 to 30 per cent. as compared to the former rate of 70 and 80 per cent.

Adjourned.

DR. J. NIESS,
Secretary.

Personals

Dr. John W. Tope of Oak Park has received a commission as major for services in France.

Capt. Fred J. Eberspacher, M. C., U. S. Army, has resumed practice in Pana.

Dr. Anna Dwyer, Chicago, fell at Ravinia Park, July 11, fracturing her arm.

Dr. William G. Lee has returned from abroad and resumed his practice.

Dr. A. B. Taylor, Canton, has been elected county physician of Fulton county.

Dr. Frank Billings has been discharged from military service and has returned to Chicago.

Capt. Jacob Wilford Wine, Chicago, has resumed practice after service in France.

Dr. S. T. Glasford and family of Pekin are on a motor trip through the New England States.

Dr. Frank Simpson of Chicago reported the loss of $3,000 worth of radium from his office recently.

The State Department of Registration and Education restored Dr. Haldane Cleminson's license to practice, July 25.

Dr. J. W. Carlisle of Robinson made a rapid recovery from appendicitis recently.

Captain Frank Morrill of Havana, after serving over a year at Camp Shelby and Camp Sherman, has announced that he will locate in Peoria.

Major Charles H. Parkes has resumed practice in Chicago after two years' service in the Medical Reserve Corps in France.

Dr. Carl F. Lewis has returned from military service and located in Jerseyville to resume practice.

Dr. H. Gideon Wells has reached Chicago from Roumania, where he did administrative public health work.

William H. G. Logan, Col., D. C., U. S. Army, has returned after more than two years of military service, and has resumed practice in Chicago.

Dr. Walter W. Armstrong of the Chicago Department of Health, has been made city health officer of La Crosse, Wis.

Dr. George W. Cusick has been appointed local surgeon for the Illinois Central Railroad at Freeport.

Dr. John S. Sweeney, Chicago, has returned after service with the American Expeditionary Forces in France.

Harry D. Orr, Col., M. C., U. S. Army, Chicago, chief surgeon of the Thirty-Third Division, received his discharge at Camp Grand last month.

Dr. Franklin A. Turner has returned from medical and surgical service with the Red Cross in France and Palestine, and resumed practice in Rockford.

Dr. Frank W. Lambden of Chicago was exonerated by a coroner's jury of complicity in the death of a woman who was believed to have died from an illegal operation July 17.

Dr. Frank S. Lower, recently Major, M. C., U. S. Army, announces his return to practice in Chicago, limited to chiropody and surgery of the feet.

Dr. Henry B. Brown, Lincoln, has been appointed local surgeon of the Chicago and Alton Railroad, succeeding Dr. Frank M. Ewing, deceased.

Dr. Mark Greer, Vandalia, has been awarded the Military Cross by the British government for bravery in dressing wounded men under shell fire in France, in September, 1918.

Dr. E. A. Lynwood, Capt., M. C., U. S. Army, returned from France June 25 and resumed his

practice in Chicago, after serving twenty-two and a half months in the army.

Dr. Emmett A. Garrett, Peoria, has been discharged as lieutenant-colonel, M. C., U. S. Army, after nearly a year of service abroad, and has returned home.

Dr. Florence R. Kremer has resigned as assistant physician at the Kenilworth Sanatorium, to accept an appointment with Chesapeake and Ohio Hospital, Clifton Forge, Va.

Dr. Samuel J. Walker, Chicago, who recently returned from service as Major in a special American Red Cross mission, has been awarded a medal of the third class by the Greek government.

Capt. James F. Hilgenberg of Posotum, who received a citation from General Pershing some time ago, is said to have been awarded a Croix de Guerre with silver star by the French government.

Dr. Raymond H. George of Chicago, recently discharged from service as captain in the British Medical Corps, has been awarded the British military cross for bravery in action while evacuating wounded under fire.

Drs. J. W. Dunn, Chas. L. Weber, James S. Johnson and J. T. Walsh are conducting a free clinic for trachoma in school children at St. Mary's Infirmary, Cairo, to forestall the danger of infection in the schools.

Dr. Hartwell C. Howard, Champaign, who was graduated from Starling Medical College, Columbus, in 1850, and has practiced continuously since that time in Champaign, celebrated his ninetieth birthday anniversary, July 12.

The Iowa and Illinois Central District Medical Association elected Dr. W. D. Chapman of Silvis, president; Dr. A. E. Williams of Rock Island, secretary, and Dr. G. A. Wiggins of Milan, censor, at the meeting in Davenport, July 10.

Gustavus M. Blech, Lieut.-Col., M. C., U. S. Army, who went overseas as assistant division surgeon of the Thirty-Third Division, was then in command of a base hospital at Autn, France, and later was commanding officer of a large base hospital in France, returned to Chicago June 29.

Some golf enthusiast may be able to appreciate this item: 'Tis said that Dr. C. Wallace Poorman did it at the Oak Park Country Club. "His patient was the first hole, which is 522 yards from starting point to terminus. The doctor got two good shots and then holed a mashie approach for an eagle three."

Dr. C. St. Clair Drake, director of the State Department of Public Health, Springfield, was elected secretary-treasurer of the Conference of State Health Authorities at its annual meeting in Atlantic City, and was also made secretary of the executive committee of health authorities of the United States.

Dr. Evarts A. Graham has been appointed professor of surgery in Washington University, St. Louis, succeeding Dr. Fred T. Murphy, resigned. Dr. Graham will be head of the department of surgery and will have charge of the surgical service in Barnes Hospital and Children's Hospital, St. Louis.

News Notes

—The first tuberculosis clinic was held by the Lee County Tuberculosis Association at Dixon, July 9, under the instruction of Dr. Russell E. Adkins, Springfield. In the afternoon Dr. Adkins conducted a similar clinic at Sterling.

—The National Catholic War Council has financed a clinic at Mercy Hospital, Chicago, for discharged soldiers and sailors and their dependents, which opened in June. In August it will have clinics also in the Hospital of St. Mary of Nazareth and at St. Joseph's Hospital.

—Peoria is said to have two extensive hospital additions that involve an investment of a half million dollars. A drive is under way to raise $300,000 to pay the indebtedness for the new wing of St. Francis Hospital and the foundation is in place for a $200,000 addition to the Methodist Hospital.

—The Chicago Chapter of the American Red Cross, July 15, entered definitely on the preparatory measures for handling epidemic or other civilian disasters. It has appropriated $15,000 for the campaign of preparedness, to include courses of instruction for home nursing which will be under the charge of Mrs. John McMahon.

—The Chicago Department of Health offers a free two-months' course of instruction in home nursing to forestall the need of more nurses in case the influenza becomes epidemic again. The first class began August 4, and afternoon and

evening sessions will be held to accommodate different classes. The school is in the former location of Loyola University Medical School at 1258 West Fulton street. Annie McKenzie, R. N., is dean of the school. Over seven hundred women had registered for the instruction before the school opened.

—F. M. Bell, head of Armour & Company's Pharmaceutical department, sailed recently for Europe, where he will study business conditions and get an inside viewpoint of the general pharmaceutical activities in foreign countries. Mr. Bell's visit, which will last approximately two months, will include trips through England, France and Italy.

Armour & Company's line of pharmaceutical goods, which are well known in medical circles, have been under the direction of Mr. Bell for many years.

—The Department of Registration and Education of the State of Illinois, at their meeting held in Chicago July 8, unanimously voted to give full recognition to the Chicago Hospital College of Medicine, 3832 Rhodes avenue. The name of the school is to be changed to Chicago Medical School and the didactic and clinical work will be given largely afternoons and evenings. The board of administration is composed of the following Chicago physicians: Dr. Charles Hill, president; Dr. Rudolph Menn, vice-president; Dr. A. E. Mowry, secretary; Dr. Edwin G. Earle, Dr. Thomas Faith, Dr. E. P. Murdock, Dr. C. A. Simmons, Dr. B. J. Zahn, Dr. H. E. Santee and Dr. Chas. Morrow.

Marriages

Edgar Roy Brigham, Mosinee, Wis., to Dr. Adelle Ruby Black of Washburn, Ill., recently.

John Hancock McClellan, Chicago, to Miss Julia Goodman of Hamilton, Ohio, July 3.

Arthur Henry Orcutt, Arcola, Ill., to Miss Helen V. Fritman of Brooklyn, July 7.

Charles Allen Griffith, Oak Park, Ill., to Miss Rhoda Marguerite Phillips of East Chicago, Ind., June 18.

Deaths

Alvin Nelson Keith, Chicago; University of Illinois, Chicago, 1883; aged 66; died at his home, June 20, from myocarditis.

William H. Schrader, Chicago; Hahnemann Medical College, Chicago, 1887; aged 61; died at his home, June 23, from heart disease.

Stephen L. Williams, Spring Garden, Ill.; American Medical College, St. Louis, 1879; aged 80; died at his home, June 4, from cerebral hemorrhage.

Vandalier N. Swan, Maywood, Ill.; College of Physicians and Surgeons, Keokuk, Iowa, 1877; aged 71; died in the Oak Park (Ill.) Hospital, June 24, from septicemia.

Dillard Estep Samuell, Wilmington, Ill.; University of Illinois, Chicago, 1908; aged 42; died in St. Mary of Nazareth Hospital, Chicago, June 2, after an operation for appendicitis.

Martha Marill Crofut, La Grange, Ill., formerly of Denton, Texas; University of Illinois, Chicago, 1907; aged 59; died in the Ravenswood Hospital, Chicago, July 4, from carcinoma.

Frederick Day Marshall, Chicago; College of Physicians and Surgeons in the City of New York, 1868; University of Michigan, Ann Arbor, 1868; aged 78; a member of the Illinois State Medical Society; a veteran of the Civil War; died at his home, July 6.

Frederick Stanton Songer, Kinmundy, Ill.; Marion-Sim College of Medicine, St. Louis, 1897; aged 44; a member of the Association of Military Surgeons of the United States; major, M. C., Ill., N. G., assigned Fifth Infantry; died at his home, July 4.

Archibald I. Maclay, Delavan, Ill.; Jeffereson Medical College, 1874; aged 67; division surgeon of the Illinois Central Railroad; for fifteen years a member of the board of education and for several terms city and township health officer; died at his home, July 1, from heart disease.

William Wesley Houser, Lincoln, Ill.; Eclectic Medical Institute, Cincinnati, 1859; aged 81; acting assistant surgeon, U. S. Army, and later major, U. S. V., during the Civil War; for seven terms president of the Illinois State Eclectic Medical Society; was struck and instantly killed by a street car in Lincoln, June 23.

Frederick Gillette Harris, Chicago; University of Illinois, Chicago, 1899; aged 44; died suddenly at his home, July 2, from meningitis. Dr. Harris, who was a native of Chicago, was one of the best known dermatologists of the Northwest. He studied abroad in 1903, 1904, 1907 and 1908, and then became a member of the teaching force of his alma mater, which he served as professor of physical diagnosis, instructor in medicine, and associate professor of dermatology until 1912. He was also professor of dermatology and syphilology in the Illinois Post Graduate Medical School and later in the Northwestern University Medical School, Chicago. The latter position he held up to the time of his death.

Don't stay out in the hot sun too long without shading from the sun with an umbrella.